

Australian Education Review

Quality and choice

are the building blocks for good child care

**Bold child care policy
needed to overcome skills shortage**

Child care industry shake-out

**Bachelor of
grandparenting**

**Preschool crisis leaves
children unable to cope**

Child care scheme a debt trap for parents

Early Childhood Education

Pathways to quality and equity
for all children

Alison Elliott

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Foreword



The importance of the early years to children's lives is now beyond question. A good beginning to life is well recognised as the foundation for future development, health and wellbeing, not only in the early years, but also throughout life. Despite this recognition, and the concerted advocacy efforts that have flowed from it, policy and practice in early education and care in Australia still lack focus and integration.

It is this divide between knowledge and action that lies at the heart of Alison Elliott's incisive review of early childhood education. If we so clearly recognise the importance of the early years, why is the field so fragmented, disjointed and lacking integration of research, policy and practice? Elliott tackles this question directly, in a well-documented, clearly argued and balanced treatise. Each section is well researched and referenced. I am confident that this Australian Education Review will become a very valuable resource for researchers, policy makers and practitioners.

Two metaphors are used to organise the discussion – patchworks and crossroads. The patchwork metaphor is the more prominent throughout the review so I will devote more of my comments to it. The crossroads metaphor is, however, especially significant as one reflects on the way forward. Elliott uses both to good effect.

The patchwork metaphor captures the confusing mix of types of provision, regulatory regimes and policy contexts that reflect the historical origins of the field and the contemporary realities of early childhood education in the Australian federation. The background to the patchwork is the divide between care and education that, here and elsewhere, has historically characterised the field, and still does. As Elliott points out, the divide stems from the emergence in the late 19th century, on the one hand, of the kindergarten movement with its focus on early learning and preparation for school and, on the other, the day nurseries with their charitable and welfare focus.

These divergent paths have resulted in very different systems for managing and regulating provision of early childhood services. When one adds the complex tapestry of the public, private, not-for-profit, charitable, church and community players, the patchwork becomes even more complex. The divide is further reinforced in many jurisdictions by vesting responsibility for policy, administration and regulation of preschools and child care in separate portfolios of education and community services, respectively.

Preschools and early learning centres were and have remained the province of educators, with a higher proportion of qualified teachers and a clear focus on curriculum and pedagogy. Increasingly, the mix of public and private provision has become more complex with many private schools establishing early learning centres providing preschool programs, often with extended hours. In contrast, public and community preschools typically offer sessional provision that creates its own set of issues, given the needs of the ever-increasing number of women in paid employment.

As such, preschool provision is itself a patchwork varying widely across the States and Territories in the extent of provision and equity of access. Rarely questioned, preschools are increasingly seen as the base for a concerted national effort to address the policy imperatives associated with the early years. The most recent example of this is the priority placed on preschool in the Council of Australian Governments (COAG) human capital initiative.

Child care provision in Australia is similarly a patchwork. As Elliott shows, Australia has a complex mix of types of child care provision, conducted by a diverse range of providers operating in a confusing and increasingly complex administrative and regulatory environment. While examples of best practice can be identified in the care sector, examples of integration of care and education remain sparse, despite attempts to achieve a synthesis.

Another stark divide between early education and child care relates to staff, their qualifications and supply. The qualifications of staff in child care are diverse and generally lower than those in preschools and kindergartens. As Elliott illustrates, within the field there is considerable contention surrounding the issue of qualifications and professionalisation of the workforce. The push for standards-based teacher accreditation has had less impact in the child care arena than in the early education sector. As Elliott clearly shows, Australia continues to experience a shortage of both child care places and staff, despite considerable increases in government funding. It also faces considerable difficulty in raising the qualifications of staff and improving the conditions of employment for those employed in this sector.

Unlike preschool, however, child care is the subject of ongoing debate about its relative risks and benefits. It is more frequently portrayed as the problem, rather than a solution. Much of the heat in the debate has resulted from the ideological divides and biases of some influential researchers, policy makers, practitioners and advocates. The focus, at least in the first waves of research, on studies making simplistic comparisons between parental care and centre-based child care – mother versus other care – has left an indelible legacy. It is interesting that this dichotomous view has persisted, given that the extent to which children live in complex family, neighbourhood and wider social networks has been long recognised. Again, Elliott observes the changing complexity of the social worlds in which Australian children live and the challenges this presents for early education, given the complexity of the balances that families strive to achieve between the demands of caring and the responsibilities of paid employment.

Elliott provides a comprehensive overview of the evidence base supporting the early years and reviews the landmark studies. The review highlights the influence of international studies, often extrapolated beyond their context when applied to Australian early childhood education. She also identifies both the patchwork of research approaches and the spaces, the research gaps, between these.

Unlike the United States of America, Canada, the United Kingdom and parts of Europe, Australia lacks well-developed outcome data on the effects of early education. The data from the Australian Government funded Longitudinal Study of Australian Children is beginning to illustrate the connection between disadvantage and the outcomes for children. For the first time, we are accumulating on a large scale, national data on the experiences and outcomes of Australian children, from infancy onwards. For the first time, we are not solely dependent on longitudinal research from elsewhere. For the first time, we are building a national evidence base on the importance of the early years, as the base for policy and practice in this country.

As Elliott highlights, in parallel with renewing, strengthening and sustaining our national commitment to young children, we need to evaluate what works well in early childhood education. Much remains to be done. And we need to link the research data with the wealth of census, administrative and evaluation data that we comprehensively (some would say compulsively) collect.

An obvious gap in our knowledge is in the area of cost-benefit analysis. While the evidence of the benefits of intervention and prevention initiatives in the early years is considerable, our knowledge of the economic significance of investing in the early years, as opposed to other investment opportunities, is less well grounded. Australia lacks a framework for economic evaluation of the comparative costs and benefits of early education. A commitment to building the national database that will enable us to develop appropriate economic models that, in turn, will facilitate a discerning approach to our investments in the early years. In the absence of Australian economic data, we have had to rely on small-scale international examples that cannot adequately reflect our social, economic and policy contexts.

While Elliott acknowledges the importance of the social context, the implications in recent research for our understanding of the intersection of families and the systems of early education and care, requires closer attention from researchers and policy makers. Two of the studies that Elliott cites provide examples of the crucial nature of the intersection of family and early education. It is this intersection that seems a common ingredient in the success of initiatives to support and nurture development in early life, and beyond. More needs to be made in research, policy and practice of the partnership between home and early education.

The evidence from the National Institute of Child Health and Human Development (NICHD) in the United States of America bears this out, as does the Effective Provision of Pre-school Education (EPPE) Project in the United Kingdom. Both studies demonstrate the contributions that high-quality child care and preschool education, respectively, can make to children's language and cognitive development during the early years. In both studies, parent and family characteristics are, however, stronger determinants than the early childhood programs, per se. The combination of family and community, working in synergy, powerfully determines outcomes. The effect of home and preschool, in combination, is greater than either alone. As Elliott's review of the research shows, while quality early life experiences are important for all children, they have been shown to be particularly vital to overcoming the effects of disadvantage.

This brings me at last to the crossroads metaphor. This review does more than describe the divide; it clearly sketches its implications for Australia and its children. The crossroads metaphor captures the sense of profound choice. It highlights the need for regaining momentum if we are to address the educational and developmental needs of young children. In the face of the overwhelming evidence of the importance of the early years, we now need to act.

We have been at the early education crossroads for a long time. When Frances Press and I wrote the Australian background report for the OECD Thematic Review of Early Childhood Education and Care Policy the phrase 'a nation at the crossroads?' was the note on which we ended (Press & Hayes, 2000). Six years on, Alison Elliott argues cogently that Australia remains

in exactly that same position. Her call, as was ours, is that we should act. There is an urgent need to move forward, so that Australian children can enjoy equitable access to high-quality early education, and so Australian society can reap the social benefits.

As Elliott cogently argues, the way forward lies in moving beyond the care and education divide. It requires placing learning and development at the heart of our policies and practices in early childhood. In concert with this is a strengthened commitment to supports for families. These have been shown to be central to children's development, health and wellbeing, and to the sustainability of the gains from involvement in high-quality early childhood education. The National Agenda for Early Childhood provides the promise of developing a coherent, integrated approach to early childhood policies and practices. That promise will only be achieved with widespread community engagement and collective will.

Alison Elliott's review of the research identifies the terrain and frames the major issues comprehensively and with an impressive clarity. The particular strength of the work is in its balance between critically outlining the problems and constructively framing the prospects. It makes a very valuable contribution to moving the nation along the pathway to quality and equity in early childhood education for all children.

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Professor Hayes has a longstanding interest in issues related to early intervention and prevention, and their implications for the pathways children and adolescents take through life. The role of families in supporting and sustaining development, across life, is the focus of his current research and scholarship.

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Introduction

Early childhood education in Australia has been a rapidly growing part of the education sector for the past two decades and, while complex and often controversial, has, until very recently, generated limited discussion in mainstream educational policy arenas and relatively little investment in research and development. Most sector growth and investment has been in services and fee subsidies to provide care for young children while their parents work. There has been less focus on developmental issues and outcomes for children, little emphasis on strengthening early development and education components in child care, and a widening gulf between preschool and kindergarten programs and childcare programs for children in the year or so before school. Furthermore, despite seemingly bipartisan political and social commitment to the benefits of strong early childhood development and education programs, there are diverse administrative and legislative arrangements for early childhood services, limited intergovernmental agreement on policy and little concerted or coordinated effort to assure quality programs and outcomes or to close the achievement gap in the early years. Worst of all, many Australian children miss out on early childhood development and education opportunities.

Understanding existing service provision

Ideally, early childhood services should provide comprehensive developmental programs for children in the 0–5 age group. The early childhood literature is clear about the close connections between care and education and the inseparable nature of development and learning. Despite this, the separate histories and traditions of early childhood ‘care’ programs and ‘education’ programs have resulted in substantially different goals, purposes and practices in ‘child care’ and in ‘preschools’ and ‘kindergartens’. These differences are reinforced by policy, funding and administrative divisions within and between the sectors and at the state and local levels. And the care–education divide appears to be growing.

The forces of history, coupled with community beliefs about what is best for young children, plus a bewildering mix of national and state-based early childhood policy, funding and legislative requirements, have resulted in a labyrinth of child care and preschool services. There are complex layers and connections between government, voluntary and church groups, public education systems, independent, Catholic and other religious schools, community organisations, free-market forces, small business owner-operators and major commercial child care companies, plus of course families and children. So complex is the early childhood

landscape, that many people, including families seeking care, have difficulty negotiating the maze of early childhood services.

Discussions and debate about early childhood programs are most often concerned with supply and demand, and affordability, staff salaries and working conditions. Clearly, these are important issues and there is a well-documented shortage of child care places, especially for children under two years, and an equally well-documented staffing crisis (White, 2004). Accessibility and affordability are constant problems for parents. And, contrary to much public perception, early childhood care and education is not universally provided by government. Almost all child care centres in Australia are privately operated, either by not-for-profit community groups or by for-profit commercial businesses. There are few free public early childhood services of any type. In fact, fees were paid on behalf of 92% of children who used any formal early childhood service in 2002 (Australian Bureau of Statistics (ABS), 2003a, p. 5).

Most preschools and kindergartens are private and independently operated, although most are not-for-profit concerns. In the New South Wales public education system, there are less than 100 preschools attached to the 1650 public primary schools. In contrast, in the Australian Capital Territory and the Northern Territory, almost all preschools are associated with public schools. Having a government-operated preschool, however, doesn't guarantee full-time early childhood education. In the Australian Capital Territory, children are entitled to just ten-and-a-half hours of free preschool per week. Nationally, the average attendance at preschool was about 11 hours per week in 2004–05 *Report on Government Services 2006* (Productivity Commission, 2006, p. 14.12).

The growth in child care, and especially the 'child care chains' in the private for-profit sector, has resulted in its increasing political importance. Private child care providers now constitute a significant early childhood pressure group with large, well-organised industry and professional associations, and lobby groups.

In Australia, early childhood education and care has evolved in a somewhat haphazard way in response to varying community needs within changing ideological and sociopolitical environments. Recently, while growth and scope has been substantial, it has generally lagged well behind community need. In fact, good fortune and a growing economy rather than strategic planning has seen a mushrooming of child care services and lessened the pressure on governments to meet families' demands for early childhood care and education. Business entrepreneurship has ensured rapid growth of private for-profit child care centres, and Family Day Care schemes have also expanded to both meet the needs of families seeking intimate home-styled care for babies and toddlers and to keep costs in check. The result is a fragmented early childhood sector with a patchwork of services, little agreement on service types, functions or terminology and a mishmash of funding and regulations. Despite this scattergun development, Australian preschool and child care services are generally considered to be well developed, well established and well distributed by international standards and there are high levels of child participation. The Commonwealth-funded and nationally administered Quality Improvement and Accreditation Scheme (QIAS) receives worldwide recognition as a model of best practice (National Childcare Accreditation Council (NCAC), see www.ncac.gov.au).

However, participation, growth and expenditure data present aggregated information that masks patchiness in service delivery, supply, accessibility and attendance patterns. Nationwide in 2005, only 61% of four-year-old children out of an estimated 259,140 four-year-olds attended an educationally oriented preschool or kindergarten (ABS, 2006a, p. 39). A total of 208,300 children aged 4 and 5 years participated in preschool education (159,200 four-year-olds and 49,100 five-year-olds) in 2005 (ABS, 2006a, p. 20).

Despite some slight overall increase in preschool participation rates, there is a long way to go before preschool education is available for all children in the year before school. Further, there is considerable variation in preschool attendance between the States and Territories. Preschool participation rates are lowest in New South Wales and highest in Victoria (Productivity Commission, 2006a), a finding confirmed by first wave data from the Longitudinal Study of Australian Children (Harrison & Ungerer, 2005). But preschool participation rates are difficult

to compare across jurisdictions because of some double-counting, movement of children between services, different definitions of what constitutes 'preschool' and different data collection points. Complicating the picture is children's participation in preschool education programs *within* child care centres, especially in New South Wales.

The net result is that many families can't access appropriate early childhood programs. Many young children miss out on valuable development and education experiences and others have only limited opportunities for participation.

A related concern across the whole early childhood sector is the limited knowledge we have of jurisdictional-specific or centre-specific educational policies, practices and pedagogical approaches, and of developmental and education outcomes for children, or ways in which they are assessed, monitored and reported.

Unfortunately, even with the *National Standards for Centre-based Long Day Care* (see Department of Family and Community Services (FACS) www.facs.gov.au) having been endorsed in 1993 by all ministers responsible for child care, and the current national quality assurance scheme for child care centres, QIAS (NCAC, 2004), there are concerns about the significance of developmental experiences and outcomes for young children. To date, there is no process for monitoring or reporting on developmental outcomes for children within early childhood services and little Australian evidence to inform discussion about the impact of early childhood programs on children's growth and development or school readiness although population data from *The Australian Early Development Index* (Centre for Community Child Health, 2005) and the *Growing up in Australia: Longitudinal Study of Australian Children* (which was officially launched by the Australian Institute of Family Studies in February 2004) will progressively address some of these issues (Harrison & Ungerer, 2005).

International evidence indicates that quality early childhood programs impact positively on children's social and cognitive outcomes, are cost-effective, and yield improved educational performance for all children, and especially for those from disadvantaged backgrounds (Lynch, 2005). Additionally, they are instrumental in improving social and employment outcomes for families. Successful developmental outcomes however are dependent on availability and quality of early childhood programs. To date, access and affordability are continuing problems in Australia, and concepts of quality can be nebulous and difficult to assess.

But perceived differences in quality and outcomes within and between services and jurisdictions and the growing body of international evidence showing effects of setting, experiences and pedagogy on children's wellbeing and developmental outcomes are challenging traditional conceptions about early childhood provision, especially the care–education divide. Emerging from this evidence is the central role of early childhood practitioners in promoting quality experiences and environments for young children. Yet nationally, there is still no agreed position on how early childhood programs should look, how curriculum should be structured, or what values, learning experiences and outcomes could and should be expected and promoted.

The development of early childhood services

Early childhood service provision in Australia has grown from a long tradition of care and education for young children. Understanding its history helps make more sense of the current complex state of provision and capacity, accessibility, affordability, equity and quality. It also sheds light on the links within and between the various early childhood services providers and funding, regulatory and administrative bodies such as Australian, state, territory and local government bodies, local communities, charities and churches, the public and independent education sectors, and private for-profit operators.

Preschool and kindergartens for three- and four-year-old children in the year (or two) before school have long been part of the Australian educational landscape. First established in the late 19th century, they became popular in the 1950s and 1960s as families sought enhanced preparation for school and a break from day-to-day parenting. Today, children typically attend

preschool or kindergarten on a sessional basis in the year before school. In some States and Territories, preschools have developed as part of school systems; in others they are operated by community groups. Preschool programs with qualified early childhood teachers have become an integral part of some child care centres, especially in New South Wales (Elliott, 1990; Elliott & Lindsay, 1996).

Child care centres (sometimes also known as Long Day Care centres, nurseries or creches) started as charitable welfare services in the late 19th and early 20th centuries to improve the health and nutrition of children from very poor or destitute families. During the Second World War, services expanded to care for children whose mothers had joined the war effort. In the 1950s and 1960s, privately operated centres offered child care to families unable to access community or government programs.

The Australian Government began to fund preschools and kindergartens in the early 1970s when it was realised that the benefits of early education should be more widely available but that high fees excluded many children. By the mid-1970s, most funding for preschools was provided by the Commonwealth, with the balance by the States and Territories. In the late 1970s and early 1980s, after much lobbying to provide child care places to support women's workforce participation, the funding balance changed to support centres providing 'long day care' to accommodate typical work hours, rather than preschools offering part-time programs. Concomitantly, research indicating negative affects of separation and poor quality care on development fuelled calls for more effective early childhood provision (Brennan, 1994; Kelly, 1986).

By the early 1980s, an ideological battle was beginning to envelope the early childhood sector. On the one hand, child care advocates promoted working women's rights to child care in safe and enriching environments. These advocates stressed the importance of providing high quality, seamless child care and education experiences as a community service – like public schools and public hospitals. On the other hand, there were deep-seated beliefs based on traditional ideas about women's key family and homemaking roles, and that children were best cared for at home – primarily by their mothers. This view saw child rearing and child care as a private, rather than a community responsibility. While community beliefs shift with time, perceptions that mothers are the best people to care for children in the early years and that non-parental care can have a negative impact on children's development are still strong (Biddulph, 2006; Elliott, 2000d, 2004b; Holt, 2004; Kelly, 1986; Meagher, 2004).

Child care and education policies and services over the last 20 years or so have been mediated by broadly held community values and views about the sanctity of the family and women's central nurturing role. Most recently, strong lobbying and changing perceptions about women's economic importance together with better understandings of young children's developmental trajectories have resulted firstly in stronger government and community commitment to child care as a labour supply issue and secondly in better understandings of the educational significance of early childhood programs.

Today, the convergence of ideological positions on non-parental care for young children and the reality of women's workforce participation means that most children need some form of non-parental care at some time. However, despite these social shifts, and despite the importance of the early years to later social and educational development, there is no national or universal early childhood care and education entitlement for children in the years before compulsory schooling.

Old issues for new players

Many of the fundamental issues in early childhood education – supply, accessibility, affordability, funding, staffing and quality – have changed little in the last 20 years. But they have increased in relevance and are embraced and sharpened by a new generation of families, educators and policy makers and fuelled by debate on child development and child rearing, parenting, balancing work and child care. Today, early education and care discussions have moved from intimate family settings to the wider policy and media arenas.

By its very nature, this review revisits some issues that have been raised in earlier reviews and position papers. In fact, many of the issues and questions that confront today's families and policy makers are old issues in new guises for new players. The review also raises some new issues and questions – ones for which there may be no clear position or answers. Current trends toward broad, cross-sectorial participation in decision making, and notions of capacity-building for families within community and education sectors, are changing the dynamics of early childhood policy making in previously unexplored ways. The rising number of families and children with multiple risk factors who need community support and early intervention is presenting as a major challenge for the future (Sayers, 2004; Stanley, 2003, 2004a).

As in other areas of education, some early childhood issues find public voice and advocacy, while others struggle for recognition. And this is not surprising given that education issues and community values are evolutionary in nature. Issues relating to children and families are always in transition, manifesting themselves in different ways for different people and communities at different times and places. Reflection on the waxing and waning of trends indicates that, as well as change, there is some continuity of ideas in the evolutionary process and some consistent underlying themes. The most important and enduring themes relate to the value we place on young children, the role of family in children's wellbeing and the importance of early developmental experiences in shaping later educational outcomes. The current community concern about children's wellbeing needs to be reflected in a strong and united resolve to provide universal, integrated developmental programs for children in the years before school.

Years of research can be summed up by saying that the wisest path to school success is investing effort and resources up-front before children start school and that families and the wider community must assume responsibility for children's early development and learning experiences. Echoing this view, both Fiona Stanley (2004a) and recent OECD education head Barry McGaw stressed the difficulties and problems experienced by many young children and the need to boost programs that can successfully build social and intellectual capacity. Unfortunately, 'ignoring inequities in the education system has enormous implications for the future workforce ...' (McGaw, 2006, p. 1). In Australia, findings from international research are frequently cited as evidence of the cost-effectiveness and long-term benefits of quality early education programs (Janus & Offord, 2000; Maher & Goldfeld, 2003; Rowe & Rowe, 2004).

On many levels, early childhood care and education is an arena with often contradictory demands and competing stakeholders who debate about provision, equity and quality. At this key point, however, the unprecedented interest in strengthening family capacity and children's wellbeing, closing the achievement gap and boosting early childhood services and quality requires a strong and united professional and public commitment to universal, integrated approaches to care and developmental opportunities. However, current community goodwill to improve children's wellbeing is not helped by conflicting ideologies, professional territorialism or the confusing array of policies, services, funding bodies, employee awards, licensing and regulating bodies surrounding the early childhood sector.

The structure of this review paper

This review details the complexity of the early childhood care and education sector. Specifically, it highlights the strong impact of the historic care–education divide on current policy and practice, and the importance of early childhood experiences on later outcomes. It outlines factors that influence the quality of children's experiences and the impact of quality early childhood programs on later developmental and educational outcomes, including transition to school. It reflects on current policy directions and Australia's reluctance to commit to early childhood services that are holistic, seamless, inclusive and accessible. Finally, it urges an end to the care–education distinctions enshrined in funding and policy frameworks. It argues that while developing holistic early childhood services will be expensive and difficult, care and education are inseparable and bringing them together will afford long-term social and economic benefits for Australia and its children.

Existing patterns of early childhood education and care

Section 2 explores current trends and developments in early childhood care and education including the changing mix of early childhood services, growth in the numbers of child care centres and child care places, patterns of early childhood demand and participation, and the changing mix of community and private for-profit child care services. However, gaining a clear picture of provision and participation is not easy because of the complexity of early childhood services and the lack of comprehensive, comparable supply and participation data. The varying legislative and regulatory environments in which early childhood services operate in each jurisdiction and the different applications of standards and quality levels complicate the picture.

Defining the early childhood landscape

Programs for children in the years before compulsory schooling are typically grouped under the umbrella terms 'preschool services', 'early childhood services', or 'children's services', although these terms can cover a range of services that are operated, funded and regulated by different bodies and with different functions, goals and approaches.

Child care services

In the formal policy and regulatory domains, the term 'children's services' refers primarily to the child care services for children 0–12 years funded by the Australian Government to meet the needs of working families. Other families can use these services but families needing care for work purposes are supposed to have priority access. The major child care services included under the Commonwealth Children Services banner are: Child Care (Long Day Care), Family Day Care, Outside School Hours Care Services and Vacation Care Services.

Most long day child care services including Family Day Care are available during typical working hours (7 am–6 pm) or longer. Some offer night care to 9 pm and a few offer overnight care for the children of shift workers. Other Children's Services include Occasional Care Services, On-farm child care, Multifunctional Children's Services, Multifunctional Aboriginal Children's Services, Aboriginal Playgroups and Enrichment Programs, Mobiles and Toy Libraries, and In-home Care Services.

The following descriptions of the main child care services are consistent with those used in the *Report on Government Services 2006* (Productivity Commission, 2006, p. 14.2).

Centre-based child care (Long Day Care) provides long day care for children aged 0–5 years. Services are usually located in stand-alone buildings in communities with high levels of parent participation in employment or education and are increasingly planned as part of new housing developments. They may also be located in major work places, including schools, and on university campuses. Centre-based long day child care services are provided by private for-profit operators, non-profit community groups, and sometimes by employers.

Family Day Care (FDC) provides small group care, usually for babies and younger children, in private homes with registered caregivers. FDC is coordinated and funded through a Family Day Care Scheme administered by an organisation such as a local government community services department or other not-for-profit community organisation.

Occasional Care services offer short-term care while parents shop, work or are involved in other activities. They are usually located in major shopping centres or in community facilities such as 'neighbourhood centres'.

Figure 1. Definitions of main types of child care services in Australia

Many families use a mix of formal and informal early childhood services (child care, preschool, and family-based care) to accommodate their children's care and education needs (ABS, 2006a; Goodfellow & Lavery, 2003; Harrison & Ungerer, 2005).

Preschools and kindergartens

Preschools and kindergartens provide sessional early childhood education programs for children in the year or two before school during typical school hours. The term *sessional* was coined many years ago to reflect the mix of half- and full-day attendance patterns typical in preschools. Preschool programs aim to provide early developmental and educational activities to foster children's social and cognitive maturation, and to help prepare them for school.

Preschools are often included in the broad sweep of 'children's services' in an everyday sense, but they are not formally categorised as Children's Services because they do not receive Commonwealth funding. In New South Wales, most child care centres provide a preschool education program for children in the year immediately before school. State-based regulations require employment of at least one qualified early childhood teacher in each centre.

Generally, preschools and kindergartens are operated by a variety of providers including school systems, not-for-profit community groups and sometimes, profit-making businesses. Most preschools, other than those associated with public schools, charge fees. Fee scales depend on the financial status of the operator, any financial input from State and local government or other authorities, and parents' capacity to pay. When children attend a preschool program embedded in a child care centre, eligible families may access fee relief through the Child Care Benefit program. This Australian Government fee subsidy is not available to families using preschools and kindergartens.

Preschools are typically situated in local communities in dedicated, stand-alone buildings, often adjacent to schools or as part of school complexes. Sometimes, although less often than in the past, they share a space in a church or community hall that may also be used for other purposes. In small country towns, a preschool might operate just one day per week. In remote or rural areas, preschools can be mobile and move from community to community. In some jurisdictions, mainly the Australian Capital Territory, the Northern Territory and South Australia, many or most preschools are an integral part of the school system. In the Australian Capital Territory and the Northern Territory, almost all children attend a free preschool program for at least a few hours per week in the year before school entry.

Program variability

While early childhood programs are often assumed to be homogeneous in nature, they differ from community to community and State to State with location, philosophical and educational

approaches, influenced as much by history, demographics and demand, as by contemporary evidence on early childhood development and learning. Some programs are closely linked to century-old traditions based on the ideas of Friedrich Froebel, Maria Montessori or Rudolf Steiner; others draw on more contemporary ideas such as those emerging from the Reggio Emilia region of Italy, now known as the 'Reggio' approach. But most early childhood programs follow an eclectic approach informed by Froebelian traditions and newer notions of 'Developmentally Appropriate Practice' first promoted by the US-based National Association for the Education of Young Children (NAEYC) in the early 1980s (NAEYC, 1982). Generally, there is no state-mandated obligation to follow any predetermined curriculum or program, except in some state-funded preschool programs, notably in South Australia.

Over the past 20 years, loose Commonwealth–State agreements for the newer grouping of Children's Services have provided some national frameworks for child care supply, funding and quality assurance. The *National Standards for Centre-based Long Day Care* (Department of Family and Community Services, 1993) endorsed by the Ministers for social welfare/community services in January 1993 and the national Quality Improvement and Accreditation Scheme (QIAS) administered by the Commonwealth-funded National Childcare Accreditation Council (NCAC) and embraced by the States and Territories reflect the key policy platforms. State efforts to monitor and enhance child care quality, for example in curriculum development, are usually articulated with the quality principles espoused by QIAS. There is no similarly consistent national focus on quality in preschool or kindergarten education.

Impact of policy variability

The contention here is that the different policies, funding regimes and regulatory environments within and between state-level jurisdictions and service types have served to widen, rather than close the gap between care and education. Competing demands within child care centres mean that essential developmental needs and quality assurance standards are generally met, but strong emphases on early education suffer because employment of qualified early childhood educators with the skills to create rich learning environments is prohibitively expensive. Few child care centres meet the Standard on staffing proposed in the *National Standards for Centre-based Long Day Care* (Standard 4.1.1, Department of Family and Community Services, 1993).

Notwithstanding the above concerns, in some jurisdictions, and in New South Wales in particular, the boundaries between child care centres and preschools are blurred. Some child care centres provide integrated, care and education programs, but nationally, this integrated model is not common. There is no mandate for child care centres to have strong, targeted educational programs with qualified early childhood teachers, even though they may provide care for children in the year or two before school. Staff qualifications are a state matter. The majority of staff in child care centres have Vocational Education and Training (VET) qualifications or are untrained. Staff qualifications and relations between quality and qualifications are discussed more fully in Sections 3 and 4 of this review paper.

Problems in measuring capacity and need

There are several publications that provide data on early childhood services and participation in Australia. Gaining an accurate overall picture of early childhood education and care is difficult however, as there are no centralised or national processes to measure or record supply and capacity, children's attendance patterns, staffing and quality, or education and developmental inputs or outcomes. Current data collection agencies survey different populations and early childhood service types and collect different categories of information at different times. Further, many children use several services, such as long day child care, preschool and occasional care, and for varying amounts of time, sometimes within the one day.

The lack of a common school starting age across Australia further complicates the picture. State-based comparisons are difficult to make because as children start school at different

ages, so they start and finish preschool and kindergarten and/or child care at different ages, attend for different lengths of time, or attend more than one service. It is expected that school starting ages will be standardised across Australia in 2010.

In Australia, participation and capacity of Children's Services, and particularly child care and Family Day Care, are typically measured and reported by number of 'places'. This approach has developed in order to more precisely accommodate the variation referred to previously. However, there is some elasticity in definitions of a 'place'. For Child Care Benefit purposes, a place has been defined as up to 50 hours of care in a week. Because of families' varying child care needs, a 'place' may be occupied by two or more children. So a 29 'place' child care centre could easily accommodate double or treble that number of children over the course of a week. Details of the Child Care Benefit Scheme are outlined later in this review paper.

Main data sources

Major public sources of data on children's services and children's participation are the Australian Bureau of Statistics (ABS) and the Department of Family and Community Services' *Census of Child Care Services*. The annual *Report on Government Services* provides additional data.

The Australian Bureau of Statistics has conducted a triennial Child Care Survey since 1986. The most recent collection, in mid-2005, focused on families' use of early childhood care and education options during two collection weeks (ABS, 2006a). The last *Census of Child Care Services* eligible for Australian Government funding was conducted in 2004 and includes details of users, staff, and operational matters. No information was collected on the nature of developmental or educational programs or on outcomes for children.

In addition to ABS data, preschool numbers and attendance records are collected by state and territory community service departments and/or state-based and independent education authorities and by the Commonwealth Department of Education, Science and Training (DEST). Other data on child care and related service use are held by CentreLink in its Child Care Benefit administrative capacity. Data on Indigenous children's early childhood participation are collected by the Department of Education, Science and Training. The National Child Care Accreditation Council also holds extensive data on child care centres, Family Day Care and Out-of-School-Hours care as part of its quality assurance role.

While data collection agencies comment on the difficulty in collecting accurate national data on child care and preschool participation, there has not yet been agreement on a streamlined, national data collection process. A decade ago the Australian Government Senate Enquiry into Early Childhood Education (*Childhood Matters*, 1996, p. 43) recommended the need for 'synthesis of information on the provision of, and participation in, all early childhood services' and a central data collection process and agency. More recently, the Australian Council for Trade Unions (ACTU) highlighted the continuing problems with data collection and the 'serious lack' of nationally comparable data on program operations, participation rates and outcomes for children (Australian Council for Trade Unions, 2003, paragraph 17).

Current plans for nationally coordinated collections of data on early childhood care and education, involving both Commonwealth and state agencies hold some promise (Productivity Commission, 2004, p. 14.34). Finally, there seems to be a commitment to 'ongoing improvement in comparability, completeness and overall quality of reported data' (Productivity Commission, 2004, p. 14.35). Trials of a new National Minimum Data Set (NMDS) were completed recently and data items have been endorsed by the National Community Services Information Management Group (Productivity Commission, 2006, p. 14.49). Australian Bureau of Statistics data collection is also under review.

While these kinds of data collection problems are not unique to Australia (Bennett, 2002), policy and strategic planning for service delivery depends on accurate and comprehensive data. Getting the basics right is fundamental to developing good policy, establishing services and then monitoring them effectively.

Scope and scale of government funding

Commonwealth, State and Territory governments have different roles and responsibilities in funding children's services that relate primarily to their different policy and administrative objectives. As mentioned earlier, the legacy of the care–education divide has meant that Australian government funding is directed primarily to care for children 0–12 whose parents are in paid employment or are enrolled in study or training programs. In contrast, 'State and Territory governments are responsible for providing educational and developmental opportunities for children, such as preschool services' (Productivity Commission 2006, p. 14.4).

In 2004–05 the total expenditure on children's services was approximately \$2487 million compared with \$2482 million spent in 2003–04 and \$2400 million 2002–03. Of this, Australian government expenditure was \$1886 million, 76% of the total, compared with \$1800 million (79%) for 2003–04. Most of these monies (78%, that is \$1468 million) assisted families to cover child care fees via the Child Care Benefit scheme.

The ACTU report A Fair Australia: Child Care Policy (2003) says that despite the importance of the early years, Australia spends just 0.1% of GDP on early education and care and ranks 26th out of 28 OECD countries for early childhood investment.

(Productivity Commission, 2006, p. 14.7)

State and Territory government expenditure on children's services for 2004–05 was approximately \$600.3 million, down somewhat on the \$608.3 million for 2003–04 but an increase on the 2002–03 expenditure of \$571.4 million. Most of the money, around 84% or \$503.2 million, up from the 81% or \$490.1 million of 2003–04, was directed to preschool provision (Productivity Commission, 2006, p. 14.8).

The growth in child care funding is not surprising given increasing demand for child care and out-of-school care. Recent figures, however, do not include the increased expenditure committed through the Child Care Rebate scheme, which commenced in the tax year 2005–06. The rebate is an additional support to families covering 30% of their 'out-of-pocket' child care expenses for approved child care and is for those expenses not already covered by the Child Care Benefit. Families can claim the rebate as an income tax offset to a limit of \$4000 per child per year.

In general, direct operational support for child care centres has not been provided since 1997, hence the relatively small expenditure outside the fee subsidy scheme. Given a complex mix of national and State and Territory government involvement in early childhood education and care, levels of expenditure between and within States are difficult to compare. For example, the Australian Government's expenditure on child care covers children 0–12, while the States' expenditure on preschools and related services is typically for children 3–5 years of age.

The Child Care Benefit

As seen above, the Australian Government's main financial input to early childhood services is through the Child Care Benefit (Family Assistance Office) which subsidises child care costs, but not preschool fees.

The Child Care Benefit is a means-tested, demand-side, fee subsidy scheme paid on behalf of families using approved long day child care services, Family Day Care, before- and after-school care, approved vacation care, and/or informal but registered carers. Registered carers are usually grandparents, relatives, friends or nannies and sometimes small private creches, preschools and kindergartens. All must be registered with the Family Assistance Office and with the Australian Taxation Office. There is no mandatory registration of carers but families can access the Child Care Benefit only if using a registered carer. Unregulated child care generally operates within a cash economy as many independent home-based carers avoid registration to remain outside the taxation scheme. In the case of centre-based care, and Family Day Care, the subsidy is only payable where providers are accredited by the National Child Care Accreditation Council.

The Child Care Benefit is a voucher-like scheme and families can choose the type of child care they prefer and/or can access and seek to have all or part of the fee reimbursed. The subsidy is means tested and also dependent on the number of children in a family and the hours in care. Normally, subsidies are limited to 20 hours per week for non-work-related child care and to 50 hours per week for work-related care. In March 2006, the maximum Child Care Benefit payable per child was \$144.50 per week or \$300.99 for two children and \$469.78 for three children. Only families earning below \$33,361 per annum were eligible for the maximum Child Care Benefit. Clearly, many families miss out on the subsidy. Additionally, without child care subsidies, many middle-income families feel that the high cost of care makes employment for the second wage earner, usually the mother, hardly worthwhile.

Fees in some child care centres, especially in lower socioeconomic areas, are closely aligned with the maximum Child Care Benefit to avoid a gap payment. What this says about a centre's ability to provide quality developmental programs needs some investigation. Child care fees in more affluent areas range from about \$80 to \$140 per day.

Other Commonwealth funding

While Australia has largely moved from a supply-side funding model to a demand-side model, some Commonwealth operational funding is provided to Family Day Care schemes, to child care services in rural, remote and outlying suburban areas (or where a high need has been established) to multi-functional services, some occasional care services, and for early education provision for Indigenous children. Start-up funding is also provided for the establishment of new Family Day Care schemes and out-of-school-hours care, and for some centre-based care in areas of extreme need. Additional funding is provided for early childhood support and advisory services to help enhance and maintain quality developmental programs for children. The Quality Improvement and Accreditation System (QIAS) (NCAC) is funded in this way.

Family Day Care

The growth of home-based Family Day Care programs has provided the Australian Government with a low-cost option for delivering child care. Family Day Care provides flexible, small group care, in already established family homes, with a largely untrained workforce. It thus avoids the expense of purpose-built facilities and substantial salary payments. The cost of funding a Family Day Care scheme's administration is considerably less than establishing and maintaining dedicated child care centres, although the establishment of child care centres is now a largely commercial, rather than a government matter. Family Day Care has also gained legitimacy because it provides intimate, family-style care environments that many parents believe best for young children, especially those under two years (Harrison & Ungerer, 2005; Goodfellow, 2003).

Preschool

As discussed earlier, there is no national policy, framework, strategy or action plan for preschool or kindergarten education, although this might change given recent political and media emphases on the need to boost preschool education and with finalisation of work around the *National Agenda for Early Childhood* (Australian Government Task Force on Child Development, Health and Wellbeing, 2003). Until the mid-1980s, the Commonwealth did fund preschools, but funding was rolled into the Financial Assistance Grants to States in 1985, thus removing dedicated payments for preschool education. However, in the light of perceived erosions to preschool education programs, there have been calls to provide universal preschool education and restore Australian government funding (the recent Australian Education Union, 2004, p. 13; Australian Council of Social Services, 2006).

Impact of delivery and funding changes

The last 20 years or so have seen significant changes in early childhood service delivery and funding. Three key changes – the funding shift from preschool education to child care and

the concomitant growth in child care centres, the introduction of means-tested fee subsidies for families using child care, and the burgeoning private for-profit child care sector – have substantially altered the early childhood landscape.

The shift to private for-profit provision of child care has been especially effective in containing costs for governments. Privately established and operated child care ensure that government financial input remains relatively low because there is no capital or operational funding and no employee costs. However, little is known about the impact of the changing mix of services on experiences and outcomes for children although data from the *Longitudinal Study of Australian Children* are likely to provide these insights over the next decade.

Licensing and regulation of early childhood services

The States and Territories are responsible for licensing and regulating child care and preschool and kindergarten services. In some jurisdictions, Family Day Care is also subject to state-level regulations, but elsewhere it operates under local statutes, ordinances and regulations.

Regulations for child care and preschool services vary within and between jurisdictions. Typically, they specify minimum standards for space, facilities, safety requirements, numbers of children, child–staff ratios, and staff qualifications. They also deal with occupational health and safety, child welfare and related regulations, and administer applicable corporation law. Generally, centres must meet minimum licensing and regulatory standards, but there can be exceptions under special circumstances. Most regulatory units also offer professional advice and assistance in the planning, design and establishment of new services. Some provide advisory services and professional development for early childhood services and their staff. State-based funding for the delivery of preschool and related services is allocated to eligible organisations and providers through various service agreements and grants.

Demand and participation

Just as there is an incomplete national picture on the scope and funding of early childhood services, it is equally difficult to gain an accurate national picture of children's participation in early childhood programs. As previously indicated, there is limited comparability between data sources. Despite these problems, the available data demonstrate the significance of the three following propositions:

- Families need and use early childhood services for a variety of reasons.
- Demand currently exceeds supply.
- Participation varies dramatically from child to child and community to community, and is by no means universal.

Today, women with children under five are more likely to be in paid employment than in the past and there is some evidence that 'mothers may be returning to work sooner after the birth of their children' (ABS, 2003c, p. 41). Over half (57%) of mothers are back in the workforce by the time their children turn two. Nearly three-quarters (68%) are back in the workforce by the time their children are three years (ACTU, 2003, para. 3).

But women can only return to work if they can find and afford centre-based child care, obtain paid or familial home-based care, and/or activate flexible workplace arrangements. Families' difficult search for suitable care, especially for children under two years, is the subject of regular political, community and media interest.

Given the clear recognition of women's critical contribution to the workforce, a continuing need for early childhood care and education services can be expected. Further, with growing acknowledgement of the importance of quality early childhood education to successful school adjustment and long-term educational outcomes, families will continue to seek early childhood education to provide social and educational experiences for children even when, child care per se is not required.

Australian children's participation in some type of formal or informal out-of-home care is widespread. According to the Australian Bureau of Statistics, approximately 1,553,400 children (46%) aged 0–12 years accessed some form of out-of-home child care in the sample week in June 2005 (ABS, 2006a, p. 3). The most recent *Census of Child Care Services* indicated that 671,136 children aged 0–5 years used some Australian government-funded care in March 2004 (ABS, 2005, p. 22). Most participants used formal child care because of work or education commitments (ABS, 2006; *Census of Child Care Services 2004*, FACS, 2005, p. 15; Harrison & Ungerer, 2005), but also for personal reasons such as to give parents a break and for its developmental benefits for children (ABS, 2006, p. 19). Sessional preschools and kindergartens are mostly used because they are 'beneficial' for the child (ABS, 2003a).

Participation data – growth in early childhood services

The demand for child care over the last decade has resulted in strong growth in early childhood services, especially child care centres, Family Day Care and Out-of-School-Hours care as shown in Table 1.

Table 1. Number of child care services eligible for Commonwealth funding 1991–2002 (and 2004* and 2004**) that participated in the Census of Child Care

	1991a	1993a	1996–1997	1999	2002	*2004 respondents	2004**	% incr 1991–2004*
Not-for-profit community child care centres	958	1028	1063	1016	1253	1297	1361	35
Private for-profit child care centres	835	1264	2593	2617	2178	2515	3345	201
Total					3431	3812	4706	
Family Day Care	314	329	321	313	318	318		1
Before and After School Care			1703	1828	2098	2137		25 (1996–2004)
Vacation Care			577	1080	1275	1340		140 (1996–2004)

Sources: FACS (2003a), p. 8. (85% of child care services participated in the Census); Australian Institute of Health and Welfare (2002a), p. 4.

* Department of Family and Community Services (2005), pp. 9, 10 (88% of child care services participated in the Census).

** *Report on Government Services 2005*, 14A.29, 14A.38, 14A.65, 14A.47, 14A.56, 14A.74, 14A.83. Child care centres only.

The discrepancy in the two sets of 2004 figures relates to different data collection regimes. Of particular interest is an apparent increase of between 200% and 300% in the number of private for-profit child care centres since 1991. However, considerable caution must be exercised in making comparisons over time because of definitional changes and data weighting practices for non-respondent services.

Table 2 provides a breakdown of child care services by management type on a State-by-State basis. There are no comparable, readily available national figures on preschools and kindergartens. Planned changes to ABS data collection processes and the Department of Education, Science and Training (DEST) administered *National Preschool Census* suggest that this might change.

Table 2. Licensed/registered child care centres by type, 2003–04

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
Community-based	433 (23%)	203 (23%)	189 (17%)	96 (25%)	130 (53%)	38 (51%)	68 (70%)	48 (77%)	1205
Private	1410 (76%)	559 (64%)	917 (81%)	282 (74%)	113 (43%)	21 (28%)	29 (30%)	14 (23%)	3345
Government	na	113 (13%)	25 (2%)	3 (0.8%)	0	15 (20%)			156
Total	1843	875	1131	381	243	74	97	62	

Source: Productivity Commission, 2005 (Tables 14A.29, 14A.38, 14A.47, 14A.56, 14A.65, 14A.74, 14A.83, 14A.92).

Table 3 illustrates the growth in early childhood service participation between the *Census of Child Care* collections of 1996 and 2004.

Table 3. Children 0–5 using formal early childhood care and education services 1996–97, 1999, 2002 and 2004

Formal Early Childhood Services	1996–1997	%	1999	%	2002	%	2004	%	% Increase 1996 to 2004
Community Child Care Centres	82,800	16	81,330	14	113,040	15	113,690	15	37
Private for-profit Child Care Centres	211,900	40	220,210	38	254,100	35	269,330	36	27
Total children in centre-based care	294,700		301,540		367,140		383,020		
Family Day Care	84,790	16	83,080	14	95,630	13	89,300	12	5
In-home care					1,500	<1	3,240	<1	
OOSHC	99,520	19	107,420	19	148,040	20	160,800	21	61.5
Vacation Care	30,970	6	69,300	12	103,560	14	101,710	14	228
Other service types	19,160	4	16,110	3	16,280	2	14,700	1	–23
All formal care	529,320	100	577,450	100	732,150	100	752,750	100	42

Sources: FACS (2003a) p. 11, Department of Family and Community Services (2005), p. 13.

Note: The above figures may include double-counting as some children use more than one service.

The increasing use of child care by 0–4- or five-year-olds is also reflected in ABS data. Between the years 1993 and 2005, ABS surveys show a near doubling in long day care centre participation from 137,000 to 318,600 (ABS, 2006a, p. 14). In contrast, sessional preschool or kindergarten attendance remained relatively stable across the same period with 236,900 children in 1999 – 239,100 in 2002 and 257,100 in 2006 (ABS, 2006a, p. 39). ABS reports reveal some variations, adjustments and revisions to data from year to year that are attributable to different counting methods and definitions of preschool.

Table 4 provides a snapshot of recent participation in the full range of early childhood services, including preschools, based on 2005 ABS data.

Table 4. Children in formal early childhood care and education services in June 2002 and June 2005

Service Type	0-4 years 2002	5 years 2002	0-4 years 2005	5 years 2005	Total 2002	Total 2005
Long Day Child Care	282,200	14,800	302,900	15,700	297,000	318,600
Family Day Care	76,800	19,100(b)	90,600	5,800	95,900	96,400
Occasional Care	33,800	2,400	47,200	400	36,200	47,600
Preschool/Kindergarten	195,200	44,000	208,000	49,100	239,200	257,100
Total centre-based service	477,400	58,000	599,900	211,900	536,000	719,700

Source: ABS (2003a), p. 12; ABS (2006a), pp. 14, 39.

Differences in collection points, categories and processes make comparisons and accurate estimations of the real increase in participation difficult. The substantial discrepancy in reported child care participation between ABS data (ABS, 2006a, Table 4: 297,000 children) and Child Care Census data (Table 3: 367,140 children) graphically illustrates the difficulties in obtaining accurate data.

Two snapshots of early childhood service participation by age within the broad categories of formal and informal care are shown in Table 5, for 2002, and in Table 6, for 2005.

Table 5. Formal and informal early childhood services' usage, by age group, June 2002

	1 and under	2 years	3 years	4 years	5 years
Formal* child care only	49,000	63,400	94,700	135,900	44,500
Formal and informal	34,600	39,000	63,600	72,200	28,100
Informal only	139,300	59,900	33,700	13,600	55,500
No child care participation	266,700	87,000	60,300	29,200	129,000

Source: ABS (2003a).

*Formal child care includes preschool.

The 2002 child care survey defined formal early childhood services as all those that were funded and/or other centre-based services, including preschools and kindergartens. Informal services are typically those provided by babysitters and relatives. As can be seen in Table 5, participation in formal early childhood services is by no means universal, even in the year before school. In 2002, most four-year-olds (83%) and 63% of three-year-olds attended some type of formal care, but this included home care (Family Day Care) with no early education component. The data show that over a third (37%) of three-year-olds and 17% of four-year-olds did not access any type of formal early childhood service, not even through Family Day Care.

The ABS data from 2005 show that only 159,200 four-year-olds and 49,100 five-year-olds participated in formal preschool or kindergarten education programs (ABS, 2006a, p. 39). Of these, 32% (82,000) attended for less than 10 hours per week and 41% (104,000) attended for between 10 and 14 hours (ABS, 2006a, p. 40). The same survey indicates there was a total of 254,600 four-year-old participating children (ABS, 2006a, p. 14). Presumably then, only 62% of four-year-olds participated in an educational preschool program.

Nationally, there is some confusion over preschool attendance patterns. According to the *Report on Government Services 2006* (Productivity Commission, 2006, p. 14.11, Table 14A.10), 83% of four-year-old children participated in some preschool in the year immediately prior to commencing school. Participation rates appear to be 100% in Tasmania but only 59% in New

South Wales. In New South Wales however, child care centres with over 30 places are required to employ a qualified early childhood teacher. There is no obligation, however, to provide a formal preschool program, and the early childhood teacher might be assigned to duties other than teaching the preschool group. If preschool attendance *has* increased as significantly as indicated in *Report on Government Services 2006*, although this is questionable given the limited number of preschool places and high costs (Australian Education Union, 2004), most children will have attended for just a few hours each week – typically 11 hours or less (Productivity Commission, 2006, p. 14.12; ABS, 2006a, p. 40).

So, even in the important year or two before school, many children do not have any early educational experiences. As already mentioned though, these data need cautious interpretation as there is some double-counting, under-counting and variation in school starting ages, as well as data collection synchronisation issues leading to both over estimation and underestimation of participation.

Table 6. Formal and informal early childhood services' usage, by age group, June 2005

	1 and under	2 years	3 years	4 years (a)	5 years (b)
Children who didn't use child care	259,600	72,700	73,100	95,500	139,500
Children who used child care	237,100	174,900	175,300	161,100	120,000
All children	496,700	247,500	248,400	256,600	259,600
Formal* child care only	57,000	69,000	81,100	62,000	35,900
Both formal and informal	38,500	45,000	51,600	35,000	20,700
Informal care only	141,700	60,200	42,500	64,200	63,500

Source: ABS (2006), p. 14.

* In surveys prior to 2005 the definition of 'formal care' included preschool.

(a) Major differences in apparent participation for four-year-olds in 2002 and 2005 relate to exclusion of preschool from the 2005 survey. Many four-year-olds attend preschool. Some attend preschool, child care and informal care. Data on preschools are reported separately for 2005 (see ABS 2006a, p. 39 and Table 4 in this document) because preschools are considered to provide 'education' and preparation for school rather than 'child care' per se (ABS, 2006a, p. 2).

(b) Many five-year-olds attend preschool: some have already started school.

The 2005 ABS child care data shown in Table 6 indicate a continuing strong demand for formal and non-formal child care. Families' mix of formal and informal care can be a matter of personal choice or circumstances, such as accessibility and affordability. Many families use informal child care because they cannot find and/or afford formal early childhood services while others feel that child care should be a private family matter (Ashton & Elliott, 1994; Kelly, 1986; Meagher, 2003). Factors such as access, convenience, flexibility, affordability and quality all appear to be major determinants of parents' child care choices. Grandparents' increasing role in child care provision has become an area of comment and research in recent years (ABS, 2003a; Goodfellow, 2003; Elliott, 2003b).

At present, child care looks set to expand with strong market demand especially in some areas, no limits on the numbers of centre-based places eligible for the Child Care Benefit, and buoyant investment, capitalisation and growth opportunities in the now largely commercialised sector. As several financial commentators have indicated, commercial child care operators are well positioned to profit from this demand and from the government fee subsidies (*Financial Review*, 22 June 2004). The only possible limits in the short term are families' decisions about balancing work and family, means-tested imposed capping of Child Care Benefit expenditure at the family level, and the linking of Child Care Benefits to Accreditation. The impact of the 30% Child Care Rebate proposed in the 2004 Budget (Family Assistance Office) and other speculated financial concessions for families and providers are yet to be felt.

Prior to 2006, the number of Family Day Care, Out-of-School-Hours care, and in-home places eligible for Child Care Benefit were set by the Australian Government in the Federal Budget. Places were uncapped in the 2006 Federal Budget and other policy initiatives announced to boost places in these services. However, uncapping places is one thing, but finding mothers willing or able to stay at home and care for other people's children in a Family Day Care setting will be an ongoing challenge for policy makers, especially in more affluent communities.

Data on the transition to school

The K–2 years of primary school are normally considered 'early childhood years' or 'early years' and generally cater for children aged between four and eight years. Most Australian children commence school at about the age of 5 in Pre-Year 1 (somewhat confusingly called Kindergarten, Prep, Transition, Preprimary or Reception, depending on the jurisdiction) and must enrol by age six, except in Tasmania where the compulsory school starting age is five. In most States, there can be a chronological age span of some two years as children start school between about four-and-a-half and six years old. Recent government commitments to a national common school starting age by 2010 will lead to more consistent transition-to-school processes, years of schooling, patterns of progression through the grades and common school end-points (Nelson, 2003).

In 2005, there were 217,543 children in Pre-Year 1, 265,027 in Year 1, and 262,717 in Year 2. (ABS, 2006, Table 14) As universal Pre-Year 1 is still evolving in Queensland, enrolments at this level are likely to increase. Currently, children complete 12 years of education in Queensland and 13 years in the other States and Territories. Australia-wide, there were 6,615 primary schools in 2004, most of which had K–2 classes.

Factors determining participation

The above data show the considerable increases in early childhood services and in the numbers of participating children over the past decade, but they don't provide the whole picture. They do not highlight the number of children who miss out on early childhood services or who are under-served. Nor do attendance pictures provide evidence of family background effects, such as languages other than English, family ethnicity, socioeconomic status, Indigenous status, or education on participation. Little is known about the extent to which gender, place of residence, and linguistic background influence enrolment and attendance. Even less is known about children's outcomes or progression within early childhood services. Until recently, there has been no serious discussion about whether there should be nationally consistent programs, agreed learning expectations, curriculum frameworks, or monitoring and evaluation of the quality of children's experiences or their social and cognitive outcomes.

In Australia, as is the case internationally, preschool education seems to be linked to families' socioeconomic status (ABS, 2004a; Productivity Commission, 2004, *Report on Government Services 2004*; OECD, 2001) with participation increasing in line with parents' income and education. The high cost of many preschool services, limited availability and lack of alignment with working hours would partially explain the link between low participation figures and socioeconomic status.

As shown earlier, child care programs are used mainly to support parents' employment, education or training. Families also value the social and cognitive benefits afforded by quality programs (Elliott, 2003b), but this has become a source of debate that illustrates the distinction between care and education.

While acknowledging the important work-related need for child care, such services also have other functions. For example, they enable parents to engage in community activities, acting as a source of support, information and advice, and supplementing family-provided care. The *Child Care Workforce Think Tank Report* (Department of Family and Community Services (FACS), 2003b) emphasised the 'critical' social and cognitive importance of quality early developmental

programs for many children. Yet, it was this child care use for non-work purposes that prompted recent criticism of so-called 'yummy mummies' who used 'tax payer funded' child care as a babysitting option while they shopped, played tennis or lunched, in the face of extreme child care shortages for working families (*Herald Sun*, 13 February 2005).

Similar concerns about use of subsidised child care for early education and for non-work-related purposes have been raised previously in formal contexts (Auditor General, 1994; Senate Employment, Education and Training Reference Committee, 1996, p. 12). Such concerns highlight the need for much clearer understandings of the twin roles of care and education in children's development, especially as children from disadvantaged families are most likely to benefit from quality early childhood programs (Lynch, 2005).

Child care choices and educational consumerism

Over the last decade, the development of integrated services (sometimes called Early Learning Centres) spanning both the preschool and transition-to-school years in some independent schools has challenged the traditional early childhood service model. In the absence of universal community provision for early childhood services, schools that have stepped in to address families' needs for early childhood care and education and continuity between services are well positioned for growth.

With fees comparable to those charged in child care centres, preschools and early learning centres associated with independent schools capitalise on the infrastructure of the host schools to provide integrated education and care for young children. Children benefit from strong early childhood education programs and the co-located school's educational facilities, including care outside school hours. Schools benefit by drawing children and families into the school community with the expectation that they will remain to complete their schooling.

Given the high costs of early childhood education and care services and with little public early childhood provision, families have come to accept that early education is essentially a fee-for-service commodity. Most early childhood services are independently operated by commercial providers and not-for-profit groups. Families ineligible for child care subsidies and/or whose children attend non-government preschools or kindergartens usually pay substantial fees for these childhood services. In New South Wales for example, fees in preschools not attached to public schools start at about \$30 to \$40 per day. Child care centre fees start at about \$60 to \$70 per day. Before-and-after-school care fees start at about \$20 per day. Parents seeking early childhood services are thrust into educational consumerism as they must find and pay for a service that meets their child's and family's needs. While factors such as locality, convenience and cost are considered in the selection process, parents' main considerations are quality and reputation (ABS, 2003a, 2006a; Elliott, 2003a, 2003b).

Given these experiences and concerns, parents have become knowing consumers of educational services as they actively select an early childhood service that meets their needs. The practice of choosing and paying for early education based on perceived reputation and alignment with family values is then continued to schooling selection (A. Elliott, 2000b, 2004b). This forced reliance on early childhood services that are fee-paying and provided by privately educational institutions may help explain the growing shift to independent schools.

Unmet demand for early childhood services

Despite continuing growth in child care centre numbers and child care places, there appears to be a high level of unmet demand for early childhood education and care. Australian Bureau of Statistics records report an 'alarming' 106,000 children aged 0–4 years who required additional formal child care in the four weeks prior to the 2005 child care survey (ABS, 2006, p. 30, 44). Presumably many five-year-olds also missed out on child care. There are no similar figures on demand for additional preschool education.

Commenting on the 'serious shortage of childcare places' the ACTU's report, *A Fair Australia: Child Care Policy* highlighted the considerable duplication and fragmentation within

the sector and the continuing disadvantages that would be experienced by families unless there was an 'audit' of early childhood programs and 'a national plan' to address child care access and affordability (ACTU, 2003, para. 17). According to the Australian Education Union's National Preschool Education Enquiry, and borne out by data on low preschool participation the *Longitudinal Study of Australian Children* (Harrison & Ungerer, 2005) and the *Report of Government Services 2006*, children in New South Wales experienced the greatest levels of 'inequity in accessing early childhood services' and were most likely to be 'disadvantaged by lack of preschool places' and the 'fragmented approach to preschool' (Australian Education Union, 2004, p. 52). Nearly half the parents (47%) in the Longitudinal Study of Australian Children who did not use early childhood services reported 'difficulties with access and availability or problems with program quality' (Harrison & Ungerer, 2005, p. 31).

Failure to develop preschool education models that align with parents' working hours rather than with school hours adds to the equity problem. Demand for preschool places is likely to be underestimated in a sense, as few working families can use preschools because operating hours do not match typical working hours (Elliott, 2004b). Typically, these families do not consider preschool as an option, even if they could afford the fees.

What happened to integrated care and education?

The issue of preschool and kindergarten provision, funding and participation is more complicated than usually realised. As mentioned earlier, there were substantial funding shifts from sessional preschools and kindergartens to services providing long day child care in the 1980s. At this time, the intention was for new long day early childhood services to be built onto existing preschool services or in new multi-purpose settings. It was envisaged that these new services would provide seamless early care and education for children aged from birth to school age. There was no intention to separate care and education. On the contrary, it was anticipated that the new children's services would offer strong, integrated early care and education programs for children aged 0–5 years with appropriately trained early childhood professionals, including qualified early childhood teachers. Concomitantly, universities developed a range of early childhood degree programs to prepare educators who could work across the 0–8 age group as optimum developmental experiences were considered critical for all young children.

However, the visions of the 1980s have largely not been realised. For a variety of historical, ideological, territorial and financial reasons, these integrated programs for children 0–5 did not develop as initially envisaged. Therefore, it is ironic to note that the Auditor General and others express concerns that families might use child care centres for educational purposes, that is as de facto preschools (Auditor General, 1994; Senate Employment, Education and Training Reference Committee, 1996, p. 12). Failure to develop an integrated system of early childhood care and education, and shifting national funding from education to care, without recognising the real benefit and cost of providing a strong educational component within child care, has served to widen the care–education divide.

The situation in some jurisdictions where children move from child care to sessional preschool to participate in early education is testament to the entrenchment of the care and education divide. Clearly, funding constraints prohibit many child care centres providing strong early education programs with qualified early childhood teachers but as many children cannot attend a 'preschool' or kindergarten program in the year or two before school, they miss out on critical early learning opportunities.

Concluding comments

Early childhood services in Australia are characterised by breadth and diversity, or less charitably by division and fragmentation. Over the past 20 years, the unprecedented demand for early childhood care programs in the years before school has resulted in somewhat haphazard growth. Child care centres and preschools are well established as key services for working families, but they struggle to both optimise early learning and development and provide care.

At present, there is no indication that demand for child care will decline, but it may plateau as the tail end of the baby boomers become grandparents. Concomitantly, there are signs that workplaces, especially in the white collar and professional sector are becoming more family friendly and afford better options for mixing parenting, work and public life. Looking to the future, a recent report from the Australia Institute, *Work and Family Futures: How young Australians plan to work and care* (Pocock, 2004) contended that the labour market will need to better accommodate workers' family responsibilities, because contemporary young women plan to work around their family care responsibilities. They want both the option of staying at home with young children, thus avoiding the use of non-parental child care, plus flexible child care options when non-parental care is required (Ashton & Elliott, 1996; Elliott, 2004b).

As outlined, the rapid development of early childhood services and programs through the 1980s and 1990s resulted in a patchwork of early childhood service delivery. More recently described as a shambles, it is difficult to get a clear picture of early childhood provision and participation at a state level, let alone make sense of early childhood programs on a national basis. Gaps and lack of precision in the available data prevent an accurate assessment of the complexity of growth, change and participation patterns in recent years. Disparity in children's school commencement ages and data collection times and points, together with multiple services types and uses, reduce the comparability of the information. Additionally, of growing concern is a lack of comprehensive insights into the nature of children's experiences and their developmental outcomes within these early learning programs. Without clear information on program effectiveness, policy and financial decisions are difficult to make.

What is certain is that large numbers of children spend significant periods of time in formal early childhood settings, so the quality of their experiences and outcomes in these environments is very important. Quality early childhood services are expensive to establish and to operate, mainly because of the capital set-up costs and ongoing staffing costs. And, like schooling and health care, the real costs of early childhood education and care are far too expensive for most families, so must be subsidised as a community investment in the future.

Clearly, there have been dramatic increases in early childhood services accompanied by a growing awareness of the importance of children's early experiences to later wellbeing and academic success. But universally available, quality early childhood provision that accommodates both care and education needs is still a long way off. Given the unmet demand for quality, flexible child care, the substantial poverty-linked disadvantages experienced by many families and the large socioeconomically linked student-achievement gaps, even at school starting age the moral, educational and economic imperative to provide high-quality early care and education programs warrants immediate legislative action.

Evidence base

Over the past few years there have been substantial advances in understanding early childhood development and education. These have come from research in developmental psychology, health and neuroscience, as well as from early childhood education. The so-called 'brain research' has been most influential in reawakening interest in young children's development, learning and educational needs and potential. While brain development research has sometimes been oversimplified to promote or justify particular educational claims, services and products, it has highlighted the importance of evidence-based practices and propelled a re-examination of early childhood policy and practice. It has in a sense legitimised long held ideas about children's growth and development originating in the work of early childhood education pioneers such as Froebel and Montessori, and supported by more recent theorists such as Piaget and Vygotsky, and a host of contemporary psychologists and early childhood educators.

Research evidence on the importance of early development

Summarising current scientific knowledge on early child development in *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Shonkoff & Phillips, 2000) noted five key findings that have most influenced knowledge about the impact of early experiences on children's wellbeing and educational outcomes.

- Early experience affects the development of the brain and lays the foundation for intelligence, emotional health and moral development.
- Healthy early development depends on nurturing and consistent, dependent relationships.
- Healthy early development, and particularly school readiness, is dependent on how young children think and feel.
- Rapid changes in society mean that the needs of many young children are not being met.
- Early intervention is important, and well-designed, accessible early intervention programs are needed for children at risk.

Since the mid-20th century, there have been clear indicators of factors that influence children's developmental status, especially the quality of their early family experiences, their out-of-home care and their education environments. Stimulating, positive and rich environments are

acknowledged as central to optimal growth and development. In the last 20 years, evidence from a range of sources has highlighted the importance of the early years in shaping longer-term outcomes for children. But, it took the standing of reports such as *From Neurons to Neighborhoods* (Shonkoff & Phillips, 2000), *Starting Points: Meeting the Needs of Our Youngest Children* (Carnegie Corporation, 1994), the *Reversing the Real Brain Drain: Early Years Study* (McCain & Mustard, 1999), *Starting Strong: Early Childhood Education and Care* (OECD, 2001), and the Australian OECD report, the *OECD Thematic Review of Early Childhood Education and Care Policy: Australian Background Report* (Press & Hayes, 2000), to refocus interest in the role of early childhood programs to optimise child wellbeing, transition to school and later schooling outcomes.

Australian interest in the research

This section reviews research on the impact of early childhood education and care on young children and, in some cases, their families. It focuses mainly, on evidence which has most influenced policy and practice in Australian contexts. This evidence has been highlighted in several major reports and position papers, such as *A Head Start for Australia* (NSW Commission for Children and Young People & Commission for Children and Young People Qld, 2004) and *The Virtual Village: Raising a child in the new millennium* (Department of Education and Children's Services, 2005) and has underpinned initiatives such as the Australian Government's Stronger Families, Stronger Communities (2003) program and *National Agenda for Early Childhood* (Department of Family and Community Services, 2005). The evidence is also cited by various early education and school authorities as a rationale for increasing access to early childhood programs and for enhancing their quality. Importantly, research on the developmental impacts of early childhood programs has underscored the development of Australia's quality assurance scheme for child care, the Quality Improvement and Accreditation Scheme (QIAS), and similar quality assurance processes in Family Day Care and Out-of-School-Hours care.

With so many young children spending so much time in formal and informal child care, the social and educational significance of early childhood settings and children's experiences and outcomes increases. This makes what happens in early childhood services especially important. Concerns about the number of children using outside home care, the apparent decline in wellbeing for increasing numbers of children, and evidence that brain growth is dependent on environmental quality, have generated vigorous research on early development and learning. Concomitantly, child health and welfare professionals' strong interest in the whole child has invigorated debate about the value and quality of preschool care and education (Janus & Offord, 2000; Maher & Goldfeld, 2003; McCain & Mustard, 1999; Rowe & Rowe, 2004; Stanley, 2004). And both the research and debate have policy and political overtones.

Building the evidence base

Over the last decade or so, claims and counter claims about the effects of early childhood services have propelled research interest and action and have captured the attention of media, families and the wider community. These claims also bring conflicting advice to policy makers, funding bodies and practitioners within the early childhood field. What works, under what conditions and for which children are of increasing relevance and concern, but not always easy to determine. And as researchers sift through the claims, the difficulties of working in a complex and dynamic area become increasingly apparent. The multiplicity of stakeholders, services, practices and disciplinary contexts in the early childhood field means that the scope and boundaries of early childhood research are both broad and fuzzy.

Questions addressed by researchers wanting to make sense of early childhood provision and outcomes include the following:

- What is the impact of early intervention programs and more mainstream early childhood education and care?

- What are the effects of early experience on early social and cognitive development, transition to school, and later academic outcomes?
- What approaches within early childhood settings are most effective for young children?
- What is 'quality' early childhood care and education?
- How should it be measured?
- Why is it important?
- What influences quality programs and outcomes?
- What is the relationship between quality programs or aspects of quality and children's experiences and outcomes?
- To what extent do early childhood practitioners contribute to quality experiences and outcomes for children?

For Section 2 of this review paper, the research that yields insights into the questions listed above has been grouped into four main distinct, but intersecting research themes:

- evidence from early intervention programs
- research on dimensions of quality and relations between quality and outcomes
- factors that influence quality and pedagogy, and especially the role of staff in quality pedagogy
- competency-specific research.

Antecedents and overlapping themes

Early childhood care and education research has occurred in overlapping phases with recurring themes over the last century. Studies in the 1930s focused on the nature of experiences in early childhood settings, the importance of play and specific social and cognitive outcomes for children in preschool or kindergarten settings. As outside-home child care developed in the 1960s, 'attachment studies' focused on the effects of repeated separations from mothers. Simultaneously, evaluations of the impact and outcomes of early intervention programs such as Head Start began to influence the field. As out-of-home care became more common in the 1970s and early 1980s, researchers began to focus on whether child care was damaging children.

By the 1980s, the 'quality agenda' gained prominence and studies focused on identifying and explaining quality and on relations between quality and outcomes. Most recently, studies have attempted to explain the complex variables that affect children's development in early childhood settings and especially the mediating variables of family and home. Ways of improving developmental and learning outcomes for children from culturally and linguistically diverse backgrounds and economically disadvantaged communities and the cost-effectiveness of early childhood education have been of particular interest.

There is consistent evidence showing the positive impact of high-quality early education and care programs on young children's cognitive and social outcomes and adjustment to school (Burchinal, Roberts, Nabors, & Bryant, 1996; Karoly, Kilburn, & Cannon, (2006); Sammons, Sylva, Melhuish, Siraj-Blatchford, Taggart, & Elliot, 2002). Importantly, while vulnerable children at risk of school failure seem to benefit most from high-quality early childhood programs, there is also evidence of far-reaching academic and social benefits for all children. Unfortunately, for a range of social and demographic reasons, many of the most vulnerable children do not participate in early childhood programs or they attend the lowest quality programs. Similarly, children of working poor families are most often exposed to poor-quality care (Heckman, 2006; Melhuish, 2003; NICHD, 1997, 2000a, 2000b, 2002b, 2002c).

Early intervention program research

Some of the best known evidence on the impact of early experiences on later development comes from the large-scale early intervention programs and evaluations in the United States of America. Most often cited in Australia are the Head Start and Early Head Start programs, The Abecedarian Project and Project Care and the High Scope Perry Preschool study.

Head Start and Early Head Start

The Head Start program has been a model and inspiration for many similar programs all over the world. Head Start programs are geared to local community needs and cater for several hundred thousand children across the United States of America in any one year. Typically, programs provide half-time, centre-based early childhood education and care for children from disadvantaged families in the two years before starting school. They may also provide related health, parenting and other child and family support. The many Head Start evaluations generally show good short-term improvements in cognitive development and early academic performance (Barnett, 1995; Zigler & Styfco, 1993) and some longer term positive effects on educational, social and employment outcomes (Kresh, 1998; Zill, Resnick & O'Donnell, 2001). Newer studies of the impact of Head Start have addressed the issue of limited nationally consistent and comparable data and shed new light on Head Start outcomes. Early findings indicate the stronger impact of better quality programs (McKey, 2003).

Head Start findings have influenced policy making worldwide and have provided the impetus for many Australian early intervention programs. Several recent Australian reviews and policy documents have cited Head Start research in rationales for early intervention programs in vulnerable communities (Talay-Ongan, 2000; NSW Commission for Children and Young People & Commission for Children and Young People Qld, 2004) or quote from international experts such as Lynch (2005) and Heckman (2006) who draw their conclusions about the importance of early childhood education for disadvantaged young children from key US studies such as Head Start and the Perry Preschool Project.

Early Head Start targets children up to the age of three in poor communities. Commencing in the mid-1990s, it included a randomised control study examining outcomes for 3000 children who participated in either centre-based early childhood education or home visits, or both. Evidence suggests that the combination intervention has the greatest benefits with improved cognitive and language outcomes, health, and social development, including interactions with parents and peers (Love, Kisker, Ross, Schochet, Brooks-Gunn, et al., 2002).

The Abecedarian Project and Project Care

The Abecedarian Project (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002) and Project CARE (Sparling, Wasik, Ramey & Bryant, 1990) were implemented in poor communities and their positive results are widely cited as evidence of the value of strong early learning programs. Discussion on early intervention benefits in *A Head Start for Australia* (NSW Commission for Children and Young People & Commission for Children and Young People Qld, 2004) draw on findings from the Abecedarian Project.

The Abecedarian Project compared the impact of centre-based early childhood education programs complemented by home visits, and other parent support programs with a combination of family support and paediatric care but without an early childhood education program. Results showed enhanced short- and long-term outcomes for both children and their mothers in the early childhood/parent support combination program. In particular, the early education experiences benefited children's transition to school and their early school success. Provision of early childhood experiences also resulted in longer term benefits through consistently better school performance, increased school retention, increased higher education participation, decreased antisocial behaviours, and a later start to parenting (Campbell et al., 2002).

Project CARE had similar results with the combination of centre-based early education programs and parent support proving most effective. Evaluations of both models showed the effectiveness of working with both families and children, but it was the centre-based early education program that had the greatest impact on children's outcomes, with the impact often continuing into early adulthood (Burchinal, Campbell, Bryant, Wasik, & Ramey, 1997).

High Scope Perry Preschool study

The High Scope project conducted in severely disadvantaged communities, provided high quality preschool education to a group of three-year-old children with IQs lower than 90 complemented by weekly home visits. Subsequently, children who had participated in the intervention program showed both higher levels of educational achievement and increased school retention, effects that persisted to adulthood. Intervention group participants had better employment rates, less drug use, fewer teenage pregnancies, reduced crime levels, and reduced welfare dependence (Schweinhart, Barnes, & Weikhart, 1993; Lynch, 2005).

A cautionary note re intervention research findings

Despite the apparent successes of early intervention programs, various writers (e.g. Whitebook, Howes, & Phillips, 1989; Woodhead, 1994; Sammons et al., 2002), caution that it is difficult to disaggregate the complex variables that influence academic achievement. They suggest that long-term benefits of early interventions may be due to the interaction of mediating variables such as peer groups and the quality and variability of subsequent primary school experiences rather than early childhood programs per se. Woodhead (1994) in particular, stresses that academic performance is affected by school effectiveness as well as by earlier preschool experiences.

Long-term positive impacts of early interventions are also tempered by students' ethnic background. According to Currie and Thomas (1998), positive effects are more likely to fade out in the adolescent years, particularly for African-American participants and especially where schooling is of poor quality (Currie & Duncan, 1995; Garces, Thomas & Currie, 2000). Because there is little similar Australian evidence, it is difficult to ascertain fade-out effects in local contexts, but schooling characteristics such as teacher quality and classroom climate do have profound impacts on student outcomes (Hattie, 2003; Ingvarson, 2002; Masters & Forster, 2005; Rowe, 2002, 2004, 2005).

Cost-benefit analyses of early education programs

The cost benefits of early childhood programs, particularly those that provide early intervention services for vulnerable children, have been the subject of considerable investigation over a number of years (Lynch, 2005; Heckman & Krueger, 2003; Heckman & Masterov, 2000). Cost-benefit analysis data are drawn predominantly from major long-running early intervention programs in the United States of America such as the Perry Preschool program and Head Start analyses of these programs indicate that early intervention programs generate at least four types of significant savings to government. These benefits are frequently generalised to Australian contexts and are quoted to support arguments for boosting early childhood services.

The two major reported cost benefits of strong, responsive and early childhood intervention services are increased tax revenues and accompanying reductions in welfare expenditure. Appropriate early interventions leading to later school success result in higher employment rates, associated taxation contributions, and less reliance on unemployment or welfare benefits. In addition, mothers able to take advantage of preschool care are more likely to gain employment, thus further increasing tax revenue and decreasing welfare dependence. A third area of reduced expenditure is in education (for example, less grade repetition and fewer special education placements), in health (fewer emergency hospital visits) and in related welfare services. Vulnerable children are less likely to be enrolled in early intervention programs, thus reducing expenditure in this area. The final major area of reduced costs is in lower criminal justice system costs, including reduced arrest rates and court and detention expenses. Criminal justice system savings for mothers are also apparent, as was shown in the calculations of cost-benefits of the *Elmira Prenatal/Early Infancy Project* (Karoly et al., 1998; Lynch, 2005).

Despite the apparent cost benefits of early childhood provision, researchers such as Whitebook, Howes & Phillips (1989), Woodhead (1994), Brooks-Gunn (2003) Watson, Schafer and Squires (2000) and Sammons et al. (2002), argue that longer term cost benefits to society through increased taxes, reductions in welfare dependence, and savings on preventive measures for health and antisocial behaviour may not always be directly attributable to early education.

As mentioned earlier, they also suggest that concerted school efforts to optimise teaching and learning outcomes in disadvantaged communities are likely to mediate the earlier effects of preschool participation.

In Australia, research into school-based initiatives to improve literacy, such as the Reading Recovery Program (see www.readingrecovery.org), First Steps in Western Australia (see www.det.wa.edu.au), the Victorian Literacy Advance program in Catholic schools (Ainley & Fleming, 2003) and Trevor Cairney's 'family literacy' programs (Cairney, 2000; Cairney & Munsie, 1995; Cairney & Ruge, 1999) indicate that such programs tend to mediate earlier experiences, making it difficult to apportion effect (Woodhead, 1994). However, even with the specific, well-developed focus on literacy, as in the Literacy Advance program, closing the gap between the least and most able students is a challenge in the early years of school. But as was also quite clear in the Victorian work and in the New Zealand Competent Children study (Wylie, 2004), strong literacy foundations in the first year of school and in the preschool/kindergarten year flowed through to later literacy achievement.

Some researchers also urge caution in using cost-benefit analyses to document the return on investments in early childhood care and education saying that 'relative efficacy of different investments' and returns to the individual and community are difficult to judge (Watson, Schafer, & Squires, 2000, p. 8).

In summary, findings from the early intervention studies show that programs with enriched, child-focused learning experiences, together with parent support, result in improved social behaviours and enhanced cognitive and linguistic outcomes for the most disadvantaged children. These improved outcomes result in better transitions to school, better school-related motivation, and positive longer term impacts on school retention, academic achievement and employment levels (Banasich, Brooks-Gunn, & Clewell, 1992; Barnett, 1995; Blair, 2002; Campbell, et al., 2002; Farron, 2000; Kresh, 1998; Lee, Brooks-Gunn, Schnur, & Liaw, 1990; Love, Logue, Trudeau, & Thayer, 1992; Ramey & Ramey, 1992; Ramey, Ramey & Lanzi, 2000; Reynolds & Robertson, 2003; Reynolds, Temple, Robertson, & Mann, 2001; Meisels & Shonkoff, 2000).

Meta-analyses of studies on effects of early care and education programs for vulnerable children in poor communities also confirm lasting positive effects from early preschool education and care (Fuerst & Fuerst, 1993; Lazar & Darlington, 1982; Sylva & Wiltsher 1993). Importantly, these studies highlight the links between positive outcomes and the quality of early programs and help delineate characteristics of quality pedagogy and effectiveness.

Quality and effectiveness research

As out-of-home care became more common in the 1970s and 1980s, research raised questions about the effect of separations, including child care, on mother-child attachment. There was concern that ongoing separations of mother and child and failure to establish secure attachments with other primary caregivers would have negative outcomes for children. Early studies of attachment for children participating in child care (Vaughan, Gove, & Egeland, 1980; Brazelton, 1986; Belsky, 1988) concluded that longer hours in child care were associated with insecure mother-child attachments and children's anxiety. This position on the impact of *long-term separation* became the accepted orthodoxy on attachment. However, over a 20-year period, studies of children's attachment after *short-term* separation from mothers have produced inconsistent findings. This is due, at least in part, to the many complex variables involved in mother-child relations, especially individual mother and child characteristics, as well as variations in the type and quality of early childhood settings.

Early findings that some children were negatively affected by early and lengthy (over 20 hours per week) child care experiences generated more questions than they answered (Belsky, 1988; Clarke-Stewart, 1982; Lamb & Sternberg, 1990). As mentioned earlier, rather than highlighting substantial issues such as the quality of child care and how to improve it, negative attachment findings were often seized by the media to initiate ideological debates about the damaging effects of child care and the need for mothers to take greater responsibility for their children. Less often considered were the small effect sizes of risks associated with child care

and other possible influences on attachment. Of all the findings from attachment studies, the most enduring and influential in terms of early childhood education policy and practice was that more secure attachments were linked to better quality child care.

While quality of child care seemed important in attachment security, there was evidence that mothers' insensitivity and lack of responsiveness were also implicated in attachment insecurity. However, because of the complexity of care environments and characteristics of families and children, findings about the relative impact of child care and parenting characteristics on child responses and behaviours have been inconsistent. More recent studies on attachment issues, for example, Roggmann, Langlois, Hubbs-Tait and Rieser-Danner (1994), Harrison and Ungerer (2002), National Institute of Child Health and Human Development Study (NICHD, 1997) and Ahnert, Gunnar, Lamb and Barthel (2004) reported no significant associations between child care attendance and attachment security. But Ahnert et al.'s study showed that factors such as economic stress and low maternal responsiveness, especially when combined with poor quality and unstable child care, were predictors of insecure attachment. Significantly, better quality child care seemed to act as a buffer against insecure attachments for children, and especially for those with less sensitive and responsive mothers.

Quality and outcome studies

The broad-based early childhood quality and effectiveness studies that started in the 1980s have been important in shaping the debate about Australian early childhood education and care policy and practice. These quality studies grew out of the early attachment studies and the concomitant interest in early development prompted by Jean Piaget's work and its various interpretations (Piaget, 1963). The attachment studies were important because they helped explain the need for high-quality care to maintain positive attachment relations essential for child wellbeing. The work of the 1960s child development theorists highlighted the idea that early environmental experiences were powerful determinants of later development. Claims that more than 50% of intellectual development occurred before the age of four underscored growing calls for quality early childhood experiences. These were later supported by psychological and neurological research (McCain & Mustard, 1999).

Early studies examined the links between quality care and attachment security and addressed the related fear that child care was bad for children. Second generation studies have investigated the multifaceted dimensions of quality in early childhood settings and the impact of quality on outcomes for children. Accompanying the quality studies has been a vigorous and ongoing commentary about the nature of children as learners and the conception of quality as a normalising or controlling influence on development (Cannella, 1997; Dahlberg, Moss & Pence, 1999). Debate about the merits of Piagetian perspectives on child development that underpinned the *Developmentally Appropriate Practice* of the 1980s and 1990s (NAEYC, 1987) and the Vygotskian inspired view of the child as a co-constructor of development within a culturally scaffolded context, (Rogoff, 1990; Vygotsky, 1978) have run alongside studies attempting to define and evaluate quality and quality outcomes. As in the wider education and schooling sector, reform agendas in early childhood education have a range of socio-political influences and imperatives, not least of which is an overriding goal of maximising benefits and outcomes, however these are defined and measured, at the least possible cost for both governments and families. Often, as previously mentioned, the cost-effectiveness of children's participation in early childhood programs is cited as justification for improving access, quality and affordability.

While a number of factors influence children's developmental status the quality of their centre-based preschool experiences is especially important (Gullo & Burton, 1993; NICHD Early Child Care Research Network, 1997, 2002a, 2002b; Harrison & Ungerer, 2005; Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes et al., 2000). From the mid-1980s, there were a host of observational studies that reported children's better cognitive outcomes in centres with higher quality ratings (Burchinal, Ramey, Reid & Jaccard, 1995; Burchinal, Roberts, Nabors & Bryant, 1996; Helburn, 1995; McCartney, 1984). In Sweden, Andersson (1992) and Broberg,

Wessles, Lamb and Hwang (1997) found that children who entered child care earlier had better cognitive outcomes than later entrants, but that enhanced outcomes were also linked to high-quality child care programs. Later, McCain and Mustard's (1999) analysis of the Canadian *National Longitudinal Study of Children and Youth* (NLSCY) concluded that quality parenting and care giving were the most important factors in early childhood development and argued for both parenting and early childhood programs to be a community responsibility.

By the mid-1960s in Australia, the ideology of early childhood education, such as teaching the 'whole child' and developing 'individual potential', had firmly established roots (Keary, 2000, p. 14). More recently, centrality of cultural constructs on development has been highlighted (Rogoff, 1990) together with the key role of experience on brain growth and early cognitive receptiveness. Neurological research has also indicated the apparently decreasing role of experience on development as individuals mature (Shore, 1997; Zigler & Styfco, 1993). The dual focus in the early childhood research on investigating the impact of family experiences and strengthening parenting, together with enhancing the quality of early childhood settings and pedagogical practices is evidenced in much of the research. (Bowman, Donovan, & Burns, 2001; Carnegie Task Force, 1996; Harrison & Ungerer, 2005; Linke, 2000; McCain & Mustard, 1999; Mustard, 2000; Shore, 1997).

Internationally, there have been hundreds of studies investigating quality as a construct and an outcome. Most scholarly and professional comment has been on quality as a construct – how to achieve quality in centres and analyses of quality-related political and pedagogical issues. Numerous studies have investigated quality issues, the considerable interdependence among them, and the varying interpretations and models of quality and its components. Of particular interest to all those working in early childhood contexts are questions about which dimensions and which outcomes are important and which have longer term positive effects.

Three internationally important 'quality' focused studies are the National Institute of Child Health and Human Development Study (NICHD) of Early Child Care in the United States of America, the Effective Provision of Preschool Education (EPPE) in the United Kingdom, and the Competent Children study from New Zealand. In each case, these studies have been purposively, although not exclusively, designed to examine the effects of early childhood care and education on children's progress and outcomes. Findings, especially from the NICHD and EPPE studies are often cited in the quality debate and quality literature. Data from the *Longitudinal Study of Australian Children* are beginning to emerge to complement international work (Harrison & Ungerer, 2005; Gray & Sanson, 2005).

National Institute of Child Health and Human Development study

Probably the most influential study on aspects of quality in early childhood care and education settings has been the National Institute of Child Health and Human Development (NICHD) *Study of Early Child Care*. This study follows 1364 American children from birth, focusing on child care experiences and outcomes and on child care quality including sensitivity to children's needs, emotional attachment, stimulation of cognitive development, and children's interactions, exploratory behaviour and involvement (Brooks-Gunn, Han & Waldfogel, 2002).

Findings indicate strong associations between higher quality child care programs and higher scores on measures of cognitive growth, social development and school readiness (Brooks-Gunn, Han & Waldfogel, 2002; NICHD, 2000). Early language competence was related to the quality of language stimulation in a child's second year (NICHD, 2002a, 2002b) and behaviour problems at age three were linked with below-average quality care (Brooks-Gunn, 2003). While the NICHD study reinforced the importance of quality settings on outcomes for children, it may have underestimated the negative affects of poor quality care by under-representing poor-quality care centres in its sample (NICHD, 1997). Poor-quality care providers are unlikely to volunteer to participate in research.

The Effective Provision of Preschool Education study

The Effective Provision of Preschool Education study in the United Kingdom followed 3000 children from 141 preschool centres from age three to age seven (Key Stage 1 in the UK). Yet

to be completed, findings indicate that preschool participation, and especially, higher quality preschool experiences, including effective, qualified staff, are associated with richer pedagogies and more positive impacts on children's cognitive and social development. In general, variations in centre effect were stronger for cognitive than for social/behavioural outcomes. The authors have concluded that differences in quality between settings of the same type are likely to be more important than differences between types of provision – such as nursery, child care and home care (Sammons et al. 2002).

The Competent Children study

The New Zealand Competent Children study has followed, since 1992, a representative sample of 500 children from early childhood through to 12–14 years. Findings show that early childhood education affords a lasting contribution to children's competency levels and that pedagogy, including the quality of teacher interactions with children, are particularly important. Rich, elaborated pedagogies, characterised by targeted teacher interactions with children, teacher knowledge of appropriate guidance and scaffolding and a focus on play, early literacy and cooperative environments appear to contribute most to children's competencies at age 10 (Wylie, Thompson & Lythe, 2001). The effects of quality early childhood education settings were still influencing children's maths and literacy competence at 12 years of age (Wylie, 2004).

Impact of pedagogy on quality provision

Central to the definition of quality in the above studies was 'quality pedagogy'. Key elements of this pedagogy were the richness and appropriateness of staff interactions with children and their scaffolding strategies, especially guiding, modeling and questioning. Other key factors linked to children's developmental outcomes were staff knowledge of children's learning needs and their knowledge and understanding of curriculum.

Findings that pedagogy is central to quality are consistent with other evidence indicating that specialised training contributes to quality interactions and rich child-centred contexts (Almy, 1975, 1982; Jordan, 1999; Lamb, Sternberg, Hwang, & Broberg, 1992; Mould, 1998; Pramling, 1996). At the heart of appropriate pedagogies is the ability of practitioners to structure environments that promote optimum engagement for children. At the preschool level, teachers' interaction with children (Mould, 1998) and their ability to structure holistic, creative play-focused and child-centred environments are key indicators of quality. Both impact positively on children's competence (Pramling, 1996).

Research in the school sector in Australia and internationally is unequivocal about the importance and impact of teacher quality on student learning (Darling-Hammond, 2000; Ferguson, 1991; Hattie, 2003; Ingvarson, 1998; 2002; Ramsey, 2000; Rowe, 2004). It indicates that teacher effectiveness outweighs student background characteristics in explaining variation in student achievement. Similarly, early childhood studies showing better outcomes for children demonstrate that the quality of the pedagogy and hence the capacity of the staff does matter. Research from *The Effective Provision of Preschool Education* study in the United Kingdom (Sammons et al., 2002) and elsewhere (Arnett, 1989; Blenkin & Hutchin, 1998) highlights the benefits to children when early childhood practitioners are professionally qualified and possess sound, sensitive pedagogic approaches and knowledge.

A clear indication of the impact of practitioner quality comes from the Effective Provision of Preschool Education (EPPE) research. This work pinpoints the importance of early childhood teaching qualifications in the creation of quality environments and the positive impact of early childhood centre managers' qualifications on a centre's quality profile. Centres where managers had a teaching qualification recorded the highest measures of quality. Conversely, higher proportions of staff with low-level qualifications were associated with poorer child outcomes on scales of peer sociability, cooperation, and conformity, and were associated with higher levels of antisocial or worried behaviours. Higher level qualifications were also linked to positive adult-child interaction and negatively associated with less favourable interactions (Sammons et al., 2002; Siraj-Blatchford, Sylva, Taggart, Sammons, Melhuish, et al. 2003).

While the findings from the EPPE study are complex, higher quality care was associated with better cognitive outcomes and it also acted to reduce some of the antisocial behaviours that have been linked with early entry to child care. However, as indicated earlier, length of care and early entry effects tend to be smaller than maternal sensitivity and socioeconomic status effects. Related findings from *The Effective Pedagogy in the Early Years Project* which drew on the EPPE sample, highlighted the positive influence of higher qualified staff on the behaviour of other staff in the centre (Siraj-Blatchford, Sylva, Muttock, Gilden, & Bell, 2002).

Given the close links between quality pedagogy and staff competence, the clear associations between staff qualifications and specific pedagogic content knowledge are to be expected. However, it is important to recognise, as posited by Sammons et al. (2003), that it is not the qualification per se that affects outcomes but the ability of the staff member to create a better pedagogic environment that makes the difference.

It is not surprising that pedagogic quality in early childhood is emerging as so important given Australian and international research and scholarly comment in the school sector, which highlights the strong association between good teaching and student achievement. However, to date, this knowledge is not at the forefront of Australian thinking about quality issues in early childhood care and education. Specifically, it has not yet influenced decisions about ways to strengthen or build practitioner competence and professionalism in early childhood settings.

Competency-specific research

Learner outcomes in early literacy

Recent studies focusing specifically on pedagogic knowledge in early learning domains have broadened the knowledge base about the impact of quality on children's development. In each case, researchers note that quality, as reflected in rich, stimulating learning environments, is compromised when staff have inadequate or incorrect content knowledge, especially in literacy, science and mathematics. Practitioners with inadequate knowledge miss opportunities to scaffold learning and extend children's thinking and problem solving (Blenkin & Hutchin, 1998; Esler, 2001; Hawthorn, 1998; Makin, Hayden, & Diaz, 2000; Neuman, 1999; Rabin, Ure, & Smith, 1999; Siraj-Blatchford et al., 2002; Thomson, Rowe, Underwood, & Peck, 2005).

The importance of rich, elaborated literacy environments has been highlighted in several studies. In the New Zealand Competent Children study, the quality of teacher support for children's learning and their interactions with children has been particularly important (Wylie with Thompson, 2003). Regrettably, but not surprisingly, evidence of some staff members' limited knowledge of good literacy environments was linked to poorer literacy environments within centres and this had detrimental effects on children's learning. The effects of poor-quality early childhood experiences were still impacting on literacy and mathematics competency at 12 years (Wylie, 2004).

Similar links between staff literacy knowledge and outcomes for children have been found in Australia. Makin, Hayden and Diaz (2000) and Rabin, Ure and Smith (1999) found that few early childhood centres provided strong, rich support for early literacy. These findings highlight the importance of well-targeted literacy curricula in practitioner preparation programs, a sentiment echoed in the recent *Report of the National Enquiry into the Teaching of Literacy* (Rowe, 2005). Encouragingly, targeted professional development seemed to improve practitioners' capacity to create richer literacy and print environments (Blenkin & Hutchin, 1998; Neuman, 1999; Rabin, Ure & Smith, 1999). In turn, these environments produced better literacy outcomes for young children.

Learner outcomes in early numeracy

In areas such as mathematics and science, teacher competencies and skills are equally important. Yet, as in literacy, many teachers lack domain specific confidence and competence (Doig, McCrae, & Rowe, 2002; Elliott & Hall, 1997; Flee, 2000; Perry, 2000; Thomson, Rowe, Underwood, & Peck, 2005). Outcomes from a recent study of numeracy in Australian

preschool and child care settings (Thomson et al., 2005) indicated that practitioners' high levels of numeracy awareness were associated with better scores on measures of early mathematics. In this study, practitioner pedagogic knowledge and practice was central to quality numeracy experiences for children, and better practitioner quality was associated with better child outcomes.

As well as process variables related to pedagogy, group size is also implicated in improved literacy and mathematics outcomes for young children as well as in other more elaborated child–adult interactions. Mosteller, Light and Sachs (1996) and Pramling (1996) found that in the early years, smaller class sizes seemed to have a positive effect on children's scores in reading and maths.

Early childhood environments around Australia have increasingly important roles in building programs that capitalise on the diversity of children's backgrounds and experiences. Simultaneously they must strengthen social and cognitive outcomes to facilitate smooth transitions to school and help close the achievement gap for developmentally vulnerable children. These tasks require staff to meet the challenges of nurturing children's development in a complex context for an uncertain future.

Unfortunately, many early childhood practitioners, especially in the child care sector, do not have the specialist skills or professional preparation expected of their counterparts in schools who must meet similar challenges with older children. Although early childhood educators' preparation is clearly linked to their competence, preparation for early childhood practitioner roles varies considerably (Elliott, 2004a, 2004b). People who occupy similar education and care roles can have qualifications ranging from a high school certificate to a master's degree in early childhood education. While at least one educator per group (or class) in preschools and kindergartens is likely to have a specialist early childhood degree level qualifications, only a small proportion in child care centres have a similar credential in early childhood education (see Table 8 in Section 4). For staff with limited or no qualifications, any expectation of complex pedagogic or curriculum knowledge, skills and competencies is unreasonable.

Concluding comments

Evidence on the impact and effectiveness of early childhood education and care shows there is a compelling knowledge base which demonstrates that enriched learning environments are fostered by better qualified practitioners, and that better quality environments and pedagogies facilitate better learning outcomes. Research shows that children's experiences and outcomes, and especially for those at risk or from disadvantaged backgrounds, are optimised when they participate in high-quality early childhood programs or in programs targeting specific areas of development such as early literacy. High-quality centre-based developmental programs tend to produce enhanced cognitive, language and social development.

For disadvantaged children, the effect of high-quality programs is maximised when implemented in conjunction with parent support and home visits (Ellis, 2005). Crucially, evidence shows that skills and understandings acquired in early childhood predict later school achievement. Evidence also indicates that many reading and other academic problems reported in the first years of school can be minimised, and even prevented, if early childhood professionals provide rich pedagogic environments targeted to the individual learning needs of each child, and if help is sought when problems requiring specialist input are diagnosed.

Quality outcomes for children are most likely when competent, qualified staff interact with small groups of children in enriched environments. Poor-quality care seems to result in no benefit or, worse still, negative effects. However, quality effects are mediated by family characteristics and background factors may account for greater effects than child care. But assessing the relative impacts of family factors, child characteristics and early experience is complex. Further, research about sensitive and emotional issues such as care of babies and young children must contend with a range of community and politically influenced factors that can weaken its design and threaten its dissemination.

In summary, while early childhood program quality and its impact on individuals and groups varies, considerably several key findings stand out:

- that program quality is positively linked to good outcomes for children and families
- the importance of trained practitioners who have the knowledge and ability to develop, implement and evaluate appropriate curricula
- the key role of pedagogies that facilitate appropriate, targeted and personalised learning and development experiences for each child
- the need for continuity and stability of environments particularly for very young children
- the importance of strong relationships with families
- the need to build capacity to support vulnerable families.

What becomes apparent from the research and policy analysis work in the early childhood arena, as outlined in Section 3 of this review paper, is that there is a strong evidence base about what works, but that improving access and quality requires both vision and commitment backed by policy and resources.

As will be seen in Sections 4 and 5, the major threats to both quality and potential in early childhood services are a lack of appropriate staff, a lack of balanced investment in early childhood services and strong collaboration and coherence across the sector, together with the deeper issue of the extent to which care and education should be integrated.

Professional standards and quality pedagogy

The review of the research contained in Section 3 demonstrated that access to good early childhood programs with appropriate curricula and pedagogy can provide children with social and cognitive experiences that promote independence and positive attitudes to learning. Such quality programs facilitate the transition to school and underpin later academic success. The research demonstrates that educators' competence, confidence and initiative are linked to appropriate pedagogy and curricula and this results in quality programs. As in the school sector, staff quality is pivotal to the effectiveness of early childhood education and care.

Given these important links, this section addresses a number of issues relating to the quality of staffing in early childhood centres. These issues include staff preparation, staff shortages and turnover, professional development, and teaching standards. Early childhood educators, like other educators, must confront and manage change. Perhaps more than most, they are confronted by the immediacy of social dynamics because of their close relations with families. Early childhood educators come face to face with increasingly complex social environments and they encounter a multiplicity of family backgrounds and experiences. These factors create imperatives for new pedagogies, curricula and organisational practices to accommodate this pluralism. Central to holistic and integrated programs are educators' abilities to engage with children, collaborate with families and colleagues and reflect on their practice.

Staffing profiles and unreliable data

Despite evidence of strong links between appropriate pedagogy and staff quality, there is considerable variability in staffing competence and qualifications within and between early childhood services. Early childhood care and education is acknowledged as one of the largest employment sectors in Australia but there is no clear picture of its workforce. The care and education dichotomy continues to be reflected in data collection processes and staffing profiles making accurate and comprehensive data collection difficult.

The growth in child care centres and child care places over the last decade assumes a similar growth in child care staff. This growth in staff is confirmed by strong increases in centre-based staff numbers between 1999 and 2002 and a continuing but slowing increase between the 2002 and 2004 *Census of Child Care Services* (FACS, 2003a; 2005).

Table 7. Paid staff in child care centres 1996–2004

	1999	2002	2004
Centre-based child care staff	38,835	49,008	52,000

Sources: 1999 *Child Care Census* (2000); 2002 *Census of Child Care Services* (2003a); 2004 *Census of Child Care Services* (2005).

The 2004 *Census of Child Care Services* reported a total of 82,275 paid staff working in child care centres or administering child care schemes including outside-school care services. Of these, some 52,000 staff worked in child care centres (18,300 in community-based centres, and 33,300 in private for-profit centres). A further 11,893 caregivers worked in their own homes through family day care schemes and 950 in occasional care centres (2004 *Census of Child Care Services*, 2005, pp. 23, 17, 43, 63). In the light of increases in centre numbers and child participation, the seemingly small staff increases might reflect staffing anomalies in respondent centres and changes to staff categories and definitions between 2003 and 2004 rather than lower staffing levels per se.

These data suffer from the weaknesses common to the field: they are not directly comparable, due to different collection regimes. National staffing data across early childhood services are difficult to obtain because there is no Commonwealth mandate to report centrally on children's participation or on staffing profiles. As with early childhood participation rates, these workforce estimates use varying definitions, categories and descriptors and have varying collection points. For example, some counts, such as for the *Census of Child Care* use Equivalent Full Time (EFT) units, where full-time equals 38 hours per week. Others seem to use actual staff numbers. To further illustrate the difficulties in gaining an accurate staffing picture, the 1996 EPAC report indicated 70,000 staff worked in child care, while the 1996 population Census reported 90,725 employees.

Sometimes staff counts include both preschool and child care staff; sometimes they include all staff in a centre; sometimes they include only staff working directly with children. Some appear to include administrative and support staff. The 1996 Australian population census appears to have included stand-alone community preschools, but not services in the broader category education. Hence, staff in preschools or kindergartens embedded within schools or teachers in child care centres do not appear to have been counted in the census. Also excluded may have been people working in voluntary capacities such as the parents, work experience students and trainees shown in the *Census of Child Care Services*.

Even taking account of the 'accuracy' of the data, they confirm high levels of part-time and casual staff in centre-based care with just over half the staff in private child care (55%) and community child care (54%) employed casually or part-time (2004 *Census of Child Care Services*, 2005, pp. 41, 63). The issue of staff casualisation, turnover and continuity has been of concern within the early childhood sector for some years because of its potential impact on children's development and learning and on staff security and morale. On a positive note, part-time staffing can be more cost-effective for employers and a preferred employment choice for staff, especially for women trying to accommodate family responsibilities (Elliott, 2004b).

Staffing qualifications across sectors and jurisdictions

Staff in early childhood centres across Australia have a wide range of qualifications and experience. Each State and Territory has its own early childhood staffing requirements, guidelines and/or regulations. There is no nationally shared understanding of appropriate credentials for staff responsible for the development, education and care of children below school age or about the content or focus on courses preparing early childhood practitioners. There are no readily accessible national data on the number of students enrolled in degree level early childhood education courses or in children's services (or equivalent) diploma and certificate courses in the Vocational Education and Training (VET) sector. There are varying pay scales and awards and no nationally consistent career pathways. Across all States and

Territories there are some 50 State and Federal industrial awards that cover staff working in preschools and child care centres.

This shambolic situation is not new or unique to Australia. Concerns about staff shortages, quality, preparation and pay in Australia have been voiced for many years (EPAC, 1996). Similar concerns are common in the United Kingdom, Canada and the United States of America (Boyd & Schneider, 1997; Grey, 1999; OECD, 2001). The crisis in early childhood staffing predicted since the 1980s has arrived.

In Australia and elsewhere, the related issues of early childhood education and care status and 'professionalism' within the field have long been on the agenda. Professional issues such as initial training, together with supply and demand, salaries and working conditions, and what the 1996 Senate Enquiry into early childhood education and care termed 'professional territorialism' have long been at the heart of quality issues in the early childhood sector.

Variability in staffing qualifications

While there is no national picture of the qualifications of staff working across the early childhood sector, it is possible to get a good idea of the range of qualifications in child care from the *Census of Child Care Services*. Table 8 shows that about 50% of staff had a child care qualification from a vocational provider.

Table 8. Staff qualifications and numbers in not-for-profit and private for-profit child care centres in 2002 and 2004

	Not-for-profit child care 2002	Private for-profit child care 2002	Not-for-profit child care 2004	Private for-profit child care 2004
Early childhood teaching	1580 (9%)	1803 (7%)	1722 (9%)	2055 (7%)
Primary teaching	332 (2%)	592 (2%)	308 (2%)	594 (2%)
Nursing	583 (3%)	590 (2%)	495 (3%)	533 (2%)
Child care (1 yr course)	2020 (11%)	3699 (15%)	2516 (13%)	5654 (19%)
Child care (2 yr course)	4374 (24%)	4995 (20%)	4642 (25%)	5935 (20%)
Child care (3 yr course)	1183 (6%)	1950 (8%)	1577 (8%)	2938 (10%)
Undertaking qualification	2292 (13%)	4608 (18%)	2128 (11%)	5351 (18%)
No qualification	3156 (17%)	2852 (11%)	3004 (16%)	2891 (10%)
Other			2368 (13%)	3628 (12%)
Total staff	18,231	25,105	18,793	29,300

Sources: 2002 *Census of Child Care Services* (FACS, 2003), pp. 42, 66;
2004 *Census of Child Care Services* (FACS, 2005), pp. 42, 64.

Table 8 shows that just under 9% of staff had an early childhood education/teaching qualification. One-third of staff had no qualification or were undertaking a qualification (2004 *Census of Child Care Services*, FACS, pp. 42, 66). Many unqualified staff may not have a final year high school qualification. Some staff qualifications would be twice-counted.

Child care centres with designated preschool or kindergarten education programs are most likely to employ degree-qualified early childhood educators. For example, New South Wales licensing requirements mandate a qualified early childhood teacher in most child care centres with over 29 children. Hence, the proportion of staff with early childhood teacher qualifications is highest in New South Wales (15% non-profit and 12% private for-profit) where there is the greatest blurring between care and education (2004 *Census of Child Care Services*, FACS, pp. 42, 64).

Typically, sessional preschools and kindergartens, in keeping with their educational emphasis and especially if located within the school system, are likely to employ staff with a degree in

early childhood education. Generally, all preschool (kindergarten) classes within schools, such as is common in government schools in the Northern Territory or the Australian Capital Territory, have a degree-qualified early childhood teacher. This person is typically assisted by a preschool 'aide' who could be unqualified. It appears that the proportion of staff with a formal qualification in 2004 range from 68.6% in the Northern Territory to 46.4% in Victoria (Productivity Commission, 2005, p. 14.22).

There are no nationally agreed or consistent standards for staffing across the child care and preschool sector. However, licensing regulations within jurisdictions provide for minimum staff qualifications within early childhood centres. The type and level of qualification is linked mainly to the age of children, the size of the group and the type of setting. Typically, older preschoolers (that is, children in the year before school) have better qualified staff, but only in some settings and in some States. Few parents would be aware of the variability of staff qualifications and competence within and between centres. They tend, as Helburn (1995) confirmed, to overestimate the quality of the child care received by their children. Few are aware of the different skills and qualifications held by staff or their differential impact on quality and children's outcomes.

Reasons for staffing variability

The reasons for the variability in staffing appear to relate mainly to the traditional care and education divide that has shaped the development of early childhood services. While many people believe young children are at a critical phase of development and require the expert nurturing and guidance of a qualified early childhood educator, there is also a widespread perception that early childhood care requires warm, kind, mother-like qualities – not specialised professional qualifications. This, of course, is a false dichotomy, as they require both.

In the waves of early childhood expansion since the 1970s, the main foci have been on providing care to boost labour market participation and on ensuring adequate quality. In a sense, the growth path for early childhood services is not unlike that of schools, just some decades later.

In the early childhood sector, recent decades have been concerned mainly with service roll-out. As in schools, there has been limited focus on factors that influenced outcomes for young children. So, although early childhood teacher education courses were embraced by the newly amalgamated Colleges of Advanced Education in the late 1970s and later by universities (Elliott & Irvine, 1984), and there was an understanding that young children's outcomes would be optimised if staff held specialist early childhood degree level qualifications, ambivalence and tensions surrounding the provision and funding of child care and early education thwarted efforts to expand degree programs and professionalise the workforce.

Today, while teaching in schools 'is virtually an all-graduate profession' (DEST, 2003, p. xix), there is no similar agreement or confidence about the appropriate qualifications for staff in centre-based early childhood settings and this impacts on status and professionalism. The situation is exacerbated by serious shortages of qualified people who are prepared to work in early childhood services under current conditions (Elliott, 2000; 2004b; Warrilow, Fisher, Cummings, Sumsion, & a'Beckett, 2004).

Confusion over early childhood qualifications

As indicated earlier, there is presently no consistent national approach to staff preparation or credentialing across the child care and preschool sector. There is little consistency in terminology to describe and identify staff qualifications, activities or responsibilities. There is confusion about qualified teacher status, and a general undervaluing of early childhood professionalism.

Underscoring this confusion is the perception that experience alone is sufficient for awarding an early childhood teacher credential (American Association of Colleges for Teacher Education (AACTE), 2004). Somehow, we have arrived at a point where a 'teacher' in early childhood can be someone with a degree level early childhood teaching qualification, a child care certificate or diploma from the VET sector, or no qualification at all. Equally, the designation 'child care

worker' can apply to a qualified early childhood teacher or a completely untrained staff member (Elliott, 2004b). Typical of the confusion in role and nomenclature was the frequent reference to the late Diana, Princess of Wales before her marriage, as kindergarten teacher, by virtue of her part-time employment at a London kindergarten. This descriptor persisted despite the Princess having no formal post-school qualifications in early childhood education.

Continuing confusion about staffing nomenclature, roles and qualifications was evident recently in New Zealand. In response to a question in Parliament about early childhood educator qualifications, the Education Minister referred to 'unqualified early childhood teachers', adding that life experience, warmth, and age should be sufficient to confer qualified teacher status on experienced and competent people already working in early childhood services. He said it was 'common sense' to recognise 'the ability of older practitioners' given 'the teacher shortage in the early childhood sector' (*New Zealand Parliament Hansard*, August 2004).

Strictly speaking, the concept of an 'unqualified' early childhood 'teacher' is an oxymoron. However, it is rarely recognised as such. Designating an unqualified person a teacher, be it royalty or one with a wealth of parenting and life experience, does nothing to promote the status of teaching or recognition of professionally endorsed practice. It's hard to imagine a similar situation in psychology or medicine.

Pressures on qualifications and training issues

Nomenclature is an issue that is intricately bound with status and professionalism and most reflects the historical care–education dichotomy. Since the late 1900s, the educationally oriented preschools and kindergartens have employed preschool or kindergarten teachers. These teachers were first trained in specialised Kindergarten Teacher Training Colleges in Sydney, Melbourne and Adelaide. From the mid-1970s, Colleges of Advanced Education and later universities were the main providers of preschool teacher qualifications.

The qualification pathway was different in child care. The first child care centres, called day nurseries and creches, employed mainly nursery nurses and child nurses with specialised qualifications such as the Nursery Nurses Education Board (NNEB) qualification from the United Kingdom. Some also employed qualified early childhood teachers. In Australia, the Nursery School Teachers College (Sydney) offered a Diploma of Teaching qualification with a focus on children in long day care centres.

In the 1980s, with the predicted expansion of child care and recognition of the inseparable nature of care and education for young children, education departments in the Colleges of Advanced Education and universities developed three- and four-year degree programs in early childhood education. These courses focused on children aged from birth to eight, spanning the preschool and early school years. Over a quarter of a century later this commitment to dedicated early childhood programs has been eroded. In some institutions, the early childhood focus has been reduced to a specialisation within a broader primary teaching course. In others, courses focus either on children from birth to five years of age or children three to eight years. There are no national bodies to monitor or accredit early childhood courses and no national expectations, content standards or graduate outcomes, and no registration for early childhood professionals.

During the child care growth spike in the 1980s and 1990s, the VET sector expanded its child care training programs to meet the growing need for child care staff who could be trained more quickly and cheaply than in universities and who would be less expensive to employ. The VET sector first offered a Child Care Certificate, and later an Associate Diploma in Child Care, and it now provides a range of Children's Services awards from certificate through to diploma level, and all linked to the Australian Qualifications Framework.

National code	Qualification name
CHC20399	Certificate II in Community Services (Children's Services)
CHC30399	Certificate III in Community Services (Children's Services)
CHC40399	Certificate IV in Community Services (Children's Services)
CHC50399	Diploma of Community Services (Children's Services)
CHC60399	Advanced Diploma of Community Services (Children's Services)

Figure 2. Major children's services qualifications in the Australian Qualifications Framework

Compared with university courses, however, there is less consistency in the ways VET Children's Services courses are resourced and delivered. Although all are accredited with the *Australian National Training Quality Council*, are competency-based and modularised, and must be delivered by a Registered Training Organisation, they are delivered by a variety of providers, in a variety of modes, and with little, if any, monitoring of quality or of student outcomes (Elliott, 2004b).

This combination of factors and especially the lack of national or even state requirements for degree level qualifications in early childhood, make it difficult for universities to justify offering degree level courses in a competitive education environment. Gradually, early childhood courses have lost their strong, specialist early childhood focus. At best, early childhood courses are becoming integrated with primary education. If recent calls for universal preschool education are acted upon, early childhood teacher education capacity in universities will need to be increased dramatically – and quickly (Elliott, 2006).

Occupation classifications

The care–education divide is further cemented by the staffing categories designated to early childhood workers in the *Australian Standard Classification of Occupations* (ABS, 1997). Early childhood staff are divided into professional and non-professional categories. *Education Professionals* (Category 24) include pre-primary (preschool) teachers and *Intermediate Service Workers* (Category 63). This latter category includes Children's Care Workers (6312) with the following subcategories: Child Care Workers, FDC Worker and Nanny, alongside workers in bars and hotels. The entry requirement for this category is an Australian Qualification Framework (AQF) Certificate II or at least one year of relevant experience. Child Care Coordinators are included in the occupational subheading Miscellaneous Special Managers, *Managers and Administrators*. Other practitioners in early childhood centres are designated Education Aides (6311), including Preschool Aide, Integration Aide, Teacher's Aide, and Aboriginal and Torres Strait Islander Education Worker.

Tasks specified for each category reflect a clear care–education distinction. The education category (pre-primary school teachers) includes teaching, promoting intellectual development, planning and evaluating. The care category has a limited focus on learning and development, including skills such as care, supervision, assisting, managing, serving and entertaining (ABS, 1997, pp. 180, 458).

As mentioned earlier, there is some confusion and lack of differentiation in child care and education staff roles, duties and job titles. It's difficult to be certain whether descriptors such as 'child care worker' reflect the current roles of child care practitioners, or define or predict them. While it is likely to be a combination of both, these descriptors reflect and perpetuate traditional distinctions between care and education and do little to enhance the perception and status of early childhood education and care. Several recommendations about revitalising early childhood care and education sector and addressing the staff shortages are presented in the *2003 Child Care Workforce Think Tank Report* (Department of Family and Community Services, 2003b). Most importantly perhaps was the recommendation:

That the Commonwealth take a lead in partnership with the states and territories and, as a matter of urgency, take steps to develop, implement and monitor a national workforce plan. The workforce plan needs to deliver a high quality, flexible, diverse and appropriately qualified workforce to work across the range of children's services in response to changing community needs.

(Department of Family and Community Services (FACS), 2003b)

Difficulties in improving qualifications and standards

While research discussed in Section 3 indicates the importance of quality pedagogy and the strong associations between quality environments and pedagogy and qualified staff, there has been little commitment to well-qualified practitioners in early childhood centres. Complicating the picture in Australia is the lack of a national agreement on what credentials are appropriate for staff in early childhood centres and what mix of credentials are needed within an early childhood service. At present, a three- or four-year-old child in a centre-based child care centre or preschool could be in a group with an untrained staff member, a practitioner with one of several possible VET awards, or a degree-qualified early childhood teacher, depending on the State and the centre. If the child is in Family Day Care, the carer is unlikely to have any formal, relevant qualification.

As child care expanded during the 1980s and funding patterns settled, most child care centres in Australian and internationally were unable to locate or employ a full complement of professionally qualified early childhood staff as it would have put its costs beyond the market capacity to pay. In addition, they were not obliged to employ professional staff. While the *National Standards for Long Day Care* (1993) recommends staffing standards, state-based regulatory provisions set the minimum staffing requirements. Given funding constraints, many centres opt for the minimum number of qualified staff filling other positions with untrained personnel.

Since the importance of well-qualified staff is central to quality outcomes for children, the existence of poorly qualified staff in early childhood centres is a worldwide concern. Early childhood staffing problems confront the United States of America, New Zealand and the United Kingdom (Barnett, 2003a; NIEER, 2003). In most of the United States of America, the minimum staff qualification in child care centres is a high school diploma. Even in the acclaimed Head Start programs, only a quarter of staff have a four-year degree in early childhood education, yet program evaluations indicate that four-year trained staff are more effective than staff with other qualifications (Burton, Whitebrook, Brandon, Maher, Young, Bellm et al., 2002; Zill, Resnick, & O'Donnell, 2001). As discussed earlier, while Head Start has long-term benefits for disadvantaged children, analysts are of the view that larger and more consistent educational gains would occur if educators were better qualified.

The proposed US Federal legislative requirement for at least 50% of Head Start staff to have a bachelor's degree by September 2010, and the requirement that all early childhood staff have an associate degree in early childhood, or a related field, is causing concern among those who must fund and train these new practitioners (AACTE, 2004). If enacted, this legislation will create difficulties for employing authorities as there is little capacity within higher education systems to adequately prepare the required early childhood graduates. Moreover, many existing staff lack the resources or background experiences to undertake higher education.

The recent white paper from the American Association of College for Teacher Education, *The Early Childhood Challenge* (AACTE, 2004) has taken a clear stand in calling for a new early childhood professional and an all-graduate profession. It has expressed strong concern about the shortage of early childhood educators and the variability within early childhood services. It highlighted the key link between quality outcomes and experiences for children and quality teachers and the importance of a professional qualification for early childhood staff when it said:

Every child between birth and 3 years deserves a teacher with a bachelor's degree in early childhood education. Every child between 4 and 8 years of age deserves a teacher with a bachelor's degree in early childhood education and certification in the early childhood field.

(AACTE, 2004, p. 7)

A decade ago, the *Senate Enquiry into Early Childhood* (1995) raised concerns about differing community expectations about training and qualifications for people working with children under five and over five years. While a degree level qualification was the norm for staff in schools, the enquiry found that:

there was little expectation that people working with younger children would have a similar specialist qualification.

(Senate Inquiry, 1995, p. 81)

In New Zealand, despite the high cost of qualified early childhood staff, the belief that 'teacher qualifications are the key to delivering quality early childhood education ...' has resulted in legislation to ensure at least one qualified early childhood educator in each centre to improve overall quality (*New Zealand Parliament Hansard*, 4 August 2004). However, the New Zealand Government's commitment to qualified early childhood staff plus 20 hours of free preschool education for all children within community-operated preschools is not without criticism from those who claim there are simply not enough qualified early childhood teachers to go around. They say the legislation mandating a qualified early childhood educator for each centre, plus the increased cost of employing qualified staff, will cause financial hardship for centres and for families. Without commensurate increases in government support, many centres will be unable to afford qualified staff unless fees rise. As in Australia, high fees threaten affordability for families. Relatedly, the question of funding and capacity within existing tertiary training programs are issues.

In taking a strong stand on improving staff qualifications, the New Zealand Government has acknowledged the value of 'regular and high quality early childhood education' to make a 'noticeable and positive impact on a student's educational success later on' (New Zealand Government, 2004). Needless to say, the critics of this policy make little mention of the benefits of improved quality to children's learning outcomes, despite some of the strongest evidence linking quality programs and effective learning outcomes originating in the New Zealand Competent Children study.

Recent studies on pedagogic knowledge have shown that the ability to create rich, stimulating learning environments is compromised when staff have inadequate or incorrect content knowledge, especially in early language and literacy. In early literacy, maths and science, opportunities to scaffold learning and extend children's thinking and problem solving appropriately are missed because many early childhood staff lack relevant qualifications (Siraj-Blatchford et al., 2002; Rabin, Ure, & Smith, 1999; Makin, Hayden, & Diaz, 2000; Neuman, 1999). Further, the presence of better qualified staff positively influences the behaviour of other staff (Siraj-Blatchford et al., 2002).

Who would be an early childhood worker?

As has long been argued, government funding and regulations for early childhood programs both in Australia and elsewhere, provide little incentive or support for attracting and keeping appropriately qualified early childhood staff. In the child care sector in particular, working conditions and compensation are poor. The ACTU report in 2003 showed that child care practitioners both with and without formal qualifications are among the lowest paid workers in Australia. Low salaries and poor educational qualifications are closely linked. Poor pay and

conditions make it difficult to recruit and keep qualified early education staff. Poor compensation contributes to high staff turnover. High turnover disrupts continuity of care, negates training and professional development efforts, and harms overall program quality.

That the early childhood workforce requires improvement has not escaped attention of key commentators and policy makers. The Commonwealth Child Care Advisory Council's (CCCAC) report, *Child Care: Beyond 2001* (September 2001), the New South Wales *Early Childhood Teacher and Qualified Staff Report* (Warrilow et al., 2004) and the report of the *2003 Child Care Workforce Think Tank* (Family Assistance Office, 2003) have each raised concerns about the status and standing of the early childhood workforce, current and projected staff shortages and retaining and attracting qualified and skilled staff. And these concerns are not new. They were highlighted in the 1996 Senate Enquiry and in the earlier NAEYC's report, *The Growing Crisis in Child Care* (Willer, 1988). Current staffing difficulties are consistent with long-standing projections for staffing problems.

Supporting the notion that 'quality staff' are pivotal to 'quality outcomes' for children and that 'well-qualified and well-remunerated staff' and 'high quality childcare and educational opportunities' go hand in hand, the recent Australian Council of Trade Unions' report on child care (2003) stressed that poor remuneration was driving people out of the sector and more worryingly, that none of the billions of dollars directed to children's services had been targeted at wage increases.

The recent investigation in New South Wales into early childhood staff shortages raised the much discussed but rarely publicly documented cases of centres gaining approval to vary licensing requirements to alter staffing profiles because of difficulties in recruiting appropriately qualified staff. It highlighted potential problems with such variations including:

the reduction in the quality of children services as a learning environment for children ..., child protection concerns and the legal implications if centres are unable to meet regulatory standards.

(Social Policy Research Centre, 2004, *Early Childhood Teachers and Qualified Staff*, Report 4/04, p.1)

High-quality, well-qualified early childhood teachers hold the key to quality programs in the pre-compulsory early childhood sector and are:

essential for addressing pervasive and persistent educational problems such as low reading and maths achievement, particularly of children from low socioeconomic environments.

(AACTE, 2004, p. 3)

Teacher standards and professional learning

With a research base pointing to the importance of staff in assuring early childhood quality, well established early childhood training programs in universities and the vocational education sector, and a wide reach and strong community presence, the early childhood sector should be poised to deal with complex issues of quality including the fundamental issues of certification, registration, initial staff training, accreditation and professional development and leadership. A focus on practitioner preparation, credentialing, and competence is necessary to both underpin and complement the broader debate about status and professionalism.

If there is to be a genuine effort to improve outcomes from early childhood education and to close the developmental and educational gap for children 'at risk' of social exclusion, improving quality, qualifications and supply of early childhood educators requires urgent attention. Importantly, there must be resolution and national agreement on what constitutes appropriate qualifications and certification for those working with young children.

Interest in teaching accreditation, registration and professional certification pathways prevalent in the wider education sector has also surfaced among some early childhood educators and policy makers (Barblett & Maloney, 2002a, 2002b; Elliott, 2000, 2004a; Hyson, 2003a, 2003b; NAEYC, 2003). In addressing the need for greater professionalism, the New South Wales report, *Early Childhood Teachers and Qualified Staff* (SPRC Report 4/04) recommended that early childhood teachers in the children's services sector be covered within the *NSW Institute of Teachers* and that associate membership be available to staff with two-year training in children's services (Australian Qualification Framework, Level 5).

More recently, the establishment of the *National Institute of Quality Teaching and School Leadership* in 2004, now called *Teaching Australia* raised hopes that early childhood educators would be drawn into the quality assurance improvement mechanisms designed to support and strengthen teaching, foster professional learning and mentoring and build educational leadership. However, the exclusion of early childhood educators outside the school sector illustrates the difficulties faced in bring early childhood care and education within the orbit of mainstream education. Interestingly, in the United States of America, the *National Board for Professional Teaching Standards* (2003) (see www.nbpts.org/nbct/directory.cfm) provides certification for early childhood teachers, but few seek certification; most likely, because the value of this certification is not recognised beyond the traditional school education sector.

In a review of professional development, New Zealand researchers Mitchell and Cubey (2003) concluded that pedagogy can be enhanced through targeted and appropriate professional learning experiences for early childhood staff. Supporting positions of previous researchers (Darling-Hammond, 2000; Gilliam & Zigler, 2003; Ingvarson, 2002), they stressed the importance of ongoing professional learning in maintaining teacher effectiveness and helping staff implement evidence-based practice in early childhood centres. To date though, there is little or no mandated professional development requirements across the early childhood sector in Australia and little evidence that early childhood practitioners embrace professional development opportunities (Productivity Commission, 2005).

While ongoing professional development is important, more important, is the need for good initial preparation and greater consistency across initial professional preparation programs. The early childhood sector must develop and adopt standards that increase effective practice in early childhood contexts. But standards for early childhood professional preparation, such as those promoted by the NAEYC (Hyson, 2003a, 2003b), are of little value unless there is a strong commitment to and funding for initial training and preparedness to pay for qualified staff. Developing agreed standards that document the knowledge, skills and dispositions central to quality early childhood pedagogy, a framework for implementation in early childhood higher education programs, and a mechanism for assessing standards and registering practitioners is a major undertaking.

As highlighted by Mitchell and Cubey (2003), professional development is important in maintaining professional competence but finding and funding in-service professional development models to suit the diversity of staffing needs within the early childhood field is difficult. Practitioners have dramatically different backgrounds and experiences so there are many different starting points. There is little clarity about what forms of professional development are most effective and who will fund them. Further, professional development was never intended to replace initial formal qualifications, but to complement and strengthen existing professional skills.

Concluding comments

Interest in teacher effectiveness and pedagogy as cornerstones of 'quality' in early childhood settings has emerged slowly but is gaining momentum, though there is reluctance to face the issue head on. Perhaps because of the resource implications, the issue of qualification appropriateness and improvement has not been seriously tackled on a national basis. Further, in a sector where staff sensitivities about status are so acute and where there is community

concern about the value of child care, any push to highlight the limited qualifications of staff may be viewed as an attack on hardworking, poorly paid, child care staff and on child care itself. National reports are remarkably silent on what might be appropriate education and qualifications for primary education and care staff in child care and preschool centres.

Resistance to improving staff quality may be related to maintaining entrenched ideological and power positions within professional or industrial bodies. Equally however, lack of interest in promoting professionalism in child care is likely to be associated with the high costs of employing 'professionals'. We have seen early childhood education move from 'a system of education to a system of capital investment' (Semann, 2004, p. 1). And while early childhood care and education is dominated by market driven, private for-profit operators, it will be increasingly difficult to commit to a professionally qualified workforce. The higher costs of qualified staff would reduce owners' and shareholders' profits. There is also the potential to increase governments' costs substantially. Further, governments are unlikely to spend substantially more money on early childhood education and care unless confronted with exceptionally strong political or electoral pressure.

Winter's (2003) analysis of the ideologies at work in the debate about professionalism and qualifications in early childhood captures the position well. She suggests that Margetts's (2002) claims that child care predicted poorer developmental outcomes for schooling were publicly discredited to diffuse criticism of poor quality child care services. Winter reminds readers that criticism of child care is not new and rests upon the distinction between child care and education, bolstered by the twin historical notions that mothers are the best people to care for their children and that child care is about custodial care, safety and protection, rather than learning and development.

Notwithstanding poor data and confusion from providers to users of early childhood services, there is now a growing specificity regarding the core requirements of status, qualifications, remuneration and conditions of early childhood staff. The ACTU *A Fair Australia: Child Care Policy* report defines them as follows:

- Quality experiences and outcomes for children in child care and education settings are related to curricula and pedagogy, which in turn, are dependent on the competence of staff.
- There needs to be consensus on the appropriate qualifications for practitioners who provide early developmental and learning experiences for young children in child care centres and preschools.
- There must be a procedure to provide public assurance of quality and qualifications for people who provide care and education for young children.
- All early childhood centres must be well staffed with appropriately qualified early childhood educators.
- There must be central data collection processes to ascertain and monitor staffing profiles in early childhood services.
- There must be a funded system of professional development for early childhood educators that is sensitive and responsive to local needs and circumstances, affordable, and accessible.
- There must be an adequate supply of well-educated and credentialed staff to meet the learning and developmental needs of children in all early childhood settings.
- There must be a better understanding of supply and demand for early childhood staff by region, appropriate strategies to recruit, train and retain quality early childhood educators, and a cross-sectorial accreditation system for practitioner preparation.
- There must be a process to reach agreement and consensus about the knowledge bases required in early childhood education and development of a registration scheme for early childhood educators.
- There must be a process to establish and maintain an ongoing cycle of audit and review of early childhood staff qualifications and professional development requirements to support and promote quality and best practice.

- There needs to be a national regulatory body to develop and monitor standards and staffing, including agreement on staff credentials, early learning and development outcomes for children, requirements for ongoing professional learning and professional pathways including accomplished performance.

While interest in early childhood is at its peak there is a platform for revisiting definitions of professionalism in early childhood education and care and an opportunity to formulate standards and guidelines, a strong professional framework and structure, and a process for credentialing educators.

With so many Australian children participating in early childhood services and a critical mass of centres, plus a well-documented 'crisis' in early childhood staffing, it is timely to commit to national professional standards and guidelines, professional training, and good salaries and working conditions in the hope of securing the quality of early childhood educators in the decades ahead. Until there is a level of professionalism in early childhood services similar to that in schools, or in other caring professions, such as nursing, medicine, social work, the status and quality of early childhood services will remain low. There must be agreement on professional qualifications for early childhood educators that transcends the care versus education dichotomy and construction of a comprehensive national framework for preparing, credentialing and rewarding early childhood educators.

Realising the promise of quality provision for all

Synthesis of the current issues

In previous Sections of this review paper, evidence pointing to the importance of early developmental experiences for young children's wellbeing was presented. While there are many intersecting views of learning and development in early childhood and many ways to interpret and enact curricula and outcomes, several things stand out.

- Early development and learning and care and education are inextricably linked.
- Quality early childhood services with well-structured, rich and elaborated programs optimise learning and developmental outcomes for children and have longer term benefits for individuals, families and for communities.
- Staff quality is closely linked to optimum learning experiences in early childhood centres and better and more equitable outcomes for children.
- There is an urgent need for more consistent and coherent policies across early childhood sectors and greater cohesiveness and integration within and between services in order to achieve better quality programs and better outcomes for children.

In Australia, more children spend increasing amounts of time in out-of-home care and the significance of early childhood care and education during sensitive periods of development is better understood. Unfortunately, the importance of early education 'has not been matched with commensurate political or community status or investment' (Winter, 2003, p. 4), let alone with programs and resources to ensure more equitable developmental and educational outcomes.

Despite the many strengths of early childhood services in Australia, there is a patchwork of provision and many children miss out on quality early education programs. In policy terms, child care is seen as a labour force support matter, rather than a developmental and educational necessity. National policy development is in its earliest stages and initiatives such as the *National Agenda for Early Childhood* is having a long evolutionary phase in Australia so far, with no action at a service delivery level. To date, despite the historical nexus between early childhood provision and aspects of state and federal governance, there has been little effort by health, welfare and education authorities to work collaboratively within community contexts to build and assure universally accessible, quality early childhood programs for all young children.

Too often, governments have taken a passive role in reacting to market trends and preferences rather than proactively shaping and facilitating early childhood programs and outcomes. Governments are anxious not to offend any of the players and their positions.

This final section of the review reflects on the impact of distinct care and education traditions on staffing, curricula and pedagogies and on the future policy directions of early childhood services. It concludes by highlighting the need to draw on the findings of existing international early childhood research as well as building a strong Australian evidence base and for a cohesive, bipartisan strategy to provide quality early childhood programs that are universal, holistic, inclusive and accessible.

Ending the care–education dichotomy

The enduring influence of the care–education divide in early childhood has been extensively discussed and analysed (Brennan, 1990; Kelly, 1986; Sebastian, 1981). The inability of policy makers and professional groups to transcend the care–education distinctions has resulted, as predicted by Sebastian (1981) a quarter of a century ago, in a two-tiered system of early childhood education and early childhood care. This division is enshrined in funding, regulations and licensing. It is characterised by unequal distribution of resources, and by sector specific qualifications, pay and working conditions for staff. There are also access and equity issues for children and families based on socioeconomic and employment status and geographic location.

The care–education dichotomy has long been regarded as an inappropriate conceptual model for early childhood development and learning. More than a decade ago, a Schools Council report called for ‘greater national consistency’ in early education provision and nomenclature, and especially in early schooling and preschooling, as a ‘practical means of improving communication and related systems’ and improving transition to school (Schools Council, 1992, p. 55). At about the same time, Jean Gifford in *Early Childhood Education. What future?* (1993), saw overcoming the ‘care–education split’ a key challenge facing early childhood education. She commented on the negative effect of separating child care and education at the legislative and funding levels, noting in particular that the division resulted in a strong economic, rather than a developmental base for early childhood policies.

Policy determinants of the care–education split

There is considerable potential for the various levels of government to collaborate with community partners to develop and coordinate early childhood policies at the state and national levels. Such activities would enable whole of government approaches to policy, but first would require coordinated approaches to the range of functions undertaken by various arms of government and other authorities. Looking back over Australian Government policy decisions in the late 1970s and early 1980s (Senate Employment, Education and Training Reference Committee, 1996), it is now apparent that they were reactive, rather than proactive and served to widen the divide between early education and care sectors. Shifting funding from preschool and kindergarten education to child care, introducing demand-oriented funding including child care fee subsidies and the dramatic in-roads of private for-profit operators has brought child care into the market economy. Educationally oriented community preschools outside the public school system were effectively excluded from funding unless they offered longer hours of care. In most cases, they continued to provide sessional preschool to meet their clients’ needs rather than long day care. This meant they became affordable only to more affluent families who could accommodate the sessional arrangements.

Had strong government policy and funding commitment to fully integrated services for children aged 0–5 years been implemented at any point in the last 30 years, a holistic and cohesive approach to nurturing and educating children could have emerged. The hope expressed in the debates, sentiments and lobbying in the early 1980s was that the new child care centres or ‘children’s centres’ were envisaged as integrated children’s services, catering for families’ care and education needs. It just did not happen.

Rather, education remained closely associated with education authorities and care with human services, and/or the welfare, health and community sectors. Despite many attempts at greater communication between the two sectors there has been little policy interface (Auditor General, 1994; Kelly, 1986). Today these separate traditions are cemented in regulations, funding processes and in public perception. Subtly, the care–education distinction is used to maintain the status quo, and perhaps, to protect industrial territory.

Significantly, differentiating care and education helps keep costs of early childhood services in check. Early education, with its core of professionally qualified staff, is expensive. Maintaining a service model in child care and a largely non-professional and untrained workforce enables providers (and this includes governments) to contain costs. At a time when most child care is located in the private for-profit sector, minimising costs and maximising profits for owners and in some cases, for shareholders, are legitimate business goals. But the contextual pressures to increase profits can present ethical challenges for staff who are seeking optimal developmental and learning outcomes for children.

Challenging the status quo

Commonwealth government policy oversight and funding of child care has the important benefit of enabling political and financial control in the politically sensitive and emotive child and family arena. Regulation of services has far-reaching consequences for social engineering and employment. As seen in the 2004 Australian election campaign, child care was a key issue with both major parties issuing policy positions and making promises to woo electors. But rather than being a developmental or educational issue to enhance early opportunity, child care was viewed more as a labour force and employment-related matter. This position is consistent with the separation of care and education domains. In some jurisdictions, there is an explicit acceptance of the inability of child care centres to provide an education focus.

In Australia, where the States and Territories are largely responsible for education and the Commonwealth for child care, aligning child care and education would have a dramatic impact on policy and funding. Given the present political climate, bringing care and education under the one conceptual and administrative umbrella, while desirable in terms of children's developmental needs, would present major policy, legislative and logistical challenges. Further, given the commercial child care sector's reliance on fee subsidies via the Child Care Benefit, there would be considerable pressure to head off any perceived financially detrimental changes. Ironically, at a time of intense community debate about public school education and concerns about enrolment shifts away from public to private, comment on the even more accentuated trend in early childhood provision is barely audible.

So wide is the gulf between the care and education traditions, that in the mid-1990s there was concern at the State and Commonwealth levels about the cost-shifting that occurred when families used child care centres to provide preschool education (Auditor General, 1994; Senate Employment, Education and Training Reference Committee, 1996, p. 12). Non-working families' use of child care was of concern because families or individual parents might not be paying tax and therefore not contributing to its funding. Using child care centres for preschool education is especially common in New South Wales where centres typically employ degree-qualified early childhood educators and believe, correctly, that early education is integral to their programs. However, funding and expansion of the Child Care Benefit 'was predicated on parents returning to work and generating increased tax revenues to cover the extra government expenditure' (Senate Employment, Education and Training Reference Committee, 1996, p. 42). This issue should not be about whether parents are tax payers, but about children's need for quality early childhood care and education to optimise development.

In the light of accumulated evidence on the benefits of programs that optimise learning outcomes for young children, it is the child care centres that *do* provide comprehensive care and education programs that are on the right track. Not only is it conceptually and ethically inappropriate to separate the care and education functions for developmental reasons, but providing both within a long day care setting is beneficial for families trying to accommodate

work schedules. Parents value and recognise the need for both care *and* education for their children during their working hours (Elliott, 2003b).

While child care centres have so few staff with appropriate degree level qualifications (see Table 8), their ability to provide strong social and cognitive programs that prepare children for school is compromised. Indeed, the report *Childhood Matters* commented on:

marked difference (in social and cognitive functioning) between children coming (to school) from child care centres as opposed to preschool.

(Senate Employment, Education and Training Reference Committee, 1996, p. 20)

Child care centres face inherent 'practical' difficulties in planning and implementing a rich social and cognitive developmental program when they have staff with wide-ranging qualifications, backgrounds and experiences. In the last decade, perceptions about the different quality and status of child care and preschool have strengthened, as the child care sector's struggles to overcome low pay, poorer working conditions (shift work and shorter holidays), staff shortages, child abuse scandals, and cases of carelessness, neglect and fee rorts are played out in the media.

The care–education division is further reinforced in the industrial arena where child care is considered a service industry with child care workers. Many jobs are aligned with service industry unions such as the Miscellaneous Workers Union (NSW) and the Australian Liquor, Hospitality & Miscellaneous Workers Union. As mentioned earlier, child care workers are categorised along with cleaners, waiters, bar attendants, prison officers and gaming dealers. Child care workers need to have professional status.

At present, in the absence of national or even state guidelines across early childhood services and little inter-sectorial impetus to end the care–education divide or professionalise the sector, greater developmental and educational orientation seems unlikely. Improved professional preparation, professional standards and appraisal, quality programs, and more equitable early childhood outcomes are unlikely without a new strategic framework driven by strong intergovernmental policy and funding commitment. The continuing polarisation of views about the values and benefits of early childhood education and care, together with the differential legislative and funding models, will continue to propel responsibilities for policy setting and planning functions in line with the traditional care versus education model.

Program development in early childhood contexts

Reflection on the care–education divide helps contextualise discussions about curriculum development and the existing diversity of programs, philosophies and pedagogies. Such reflection highlights the differences in policy, service delivery and perceived quality across the sector and sets the scene to focus on new directions in early childhood programs. It foregrounds the question of why early childhood development is not viewed as a social and community responsibility in the way education for older children is, despite all the evidence pointing to its key role in later wellbeing and academic success.

In theory, the *National Standards* for child care (Long Day, Family Day and Out-of-School-Hours) should provide consistency across the sector, but state-based regulations override national standards. Further, there is no current mechanism to review National Standards in the light of changing evidence about early childhood development and quality child care and no commitment to implementing or monitoring the Standards, although aspects have been incorporated in the quality assurance mechanisms of the *National Child Care Accreditation Council*.

To date, there is no agreement on what a professional early childhood educator should be. Encouragingly, the National Standards for centre-based long day care indicate that all staff working in child care should have an early childhood degree or a two-year early childhood qualification, but given the enormous funding implications of this recommendation such a

staff profile is unlikely in the near future (*National Standards*, 1993, 4.1.1). The inequities in providing only some three- and four-year-old children with degree-qualified early childhood teachers is obvious, and unacceptable.

Making pedagogies explicit

The core work of professional early childhood educators is to facilitate the social, physical and cognitive development of young children. Improvements in the quality of pedagogy result in improved outcomes for children. As shown in Section 3, the quality of pedagogy depends on the quality of the educators themselves and the programs they implement.

Across all education sectors, other than early childhood education, the accepted way to achieve cohesive, structured and consistent programs and outcomes is to develop, provide and mandate use of an agreed curriculum framework or syllabus. Schools, the VET sector, universities, professional trainers, all use a curriculum of some sort to guide planning, delivery and assessment of learning and developmental programs. There is no similar widespread adoption or acceptance of the need for a curriculum in early childhood care and education sector. Programs in early childhood centres in Australia are as diverse as the centres themselves.

The idea of a curriculum and even use of the term remains contentious within the early childhood sector. Some key early childhood educators and organisations have opposed the idea of a curriculum because of fears that it could be content rather than child driven. The term curriculum tends to be equated with syllabus and the notion of a prescriptive, subject-bound set of experiences to be followed in a fixed manner in all centres. So strong has been this view, both in Australia and elsewhere, that the task of defining an appropriate early childhood curriculum has been assiduously avoided (Bredekamp & Rosegrant, 1992; OECD, 2001).

No curriculum can be a watermark for educational success, but a curriculum framework that explicates broad developmental intentions and expectations, outlines program directions, foreshadows developmental outcomes and how they will be monitored is well on the way. Curricula that assure personalised learning plans based on individual child assessments, with cognitive receptivity and future learning needs in mind, provide guidance for the development of individual strengths, and social and intellectual capabilities. Such capabilities provide children with ways of regulating their behaviour throughout life.

There is overwhelming evidence the first five years of life can affect an individual's whole life course – how they cope with school, relate to others, and how they deal with stress.

(Stanley, 2004, p. 9)

Too often, discussions about early childhood curricula have become bogged down in debates about 'process', 'content' and 'play' rather than on outcomes for children. There has also been some professional debate about whether early childhood programs should, in fact, 'prepare' children for school. But growing acceptance of periods of sensitivity to learning, the importance of interactivity in enriched environments, especially linguistic environments, and the need for more equitable outcomes has set the scene for a renewed focus on developing curricula for use in early childhood services.

The landmark OECD report *Starting Strong: Early childhood education and care* has contended 'that appropriate pedagogical frameworks are fundamental to high-quality early childhood education and care' (OECD, 2001, p. 109). Echoing this view, Winter (2003) reports that a 'consistent implementation of a well-articulated curriculum model has the potential to raise the standard of care and education experienced by young children' (2003, p. 4).

To date, the only comprehensive, cohesive and *mandatory* curriculum framework across early childhood services in Australia is the *South Australian Curriculum Standards and Accountability Framework* (SACSA). The framework provides a coherent curriculum entitlement for all children from birth to 5 years across preschools and integrated children's services administered by the

South Australian Department of Education. It is part of the broader curriculum framework adopted across all South Australian government schools and early childhood services. The curriculum is not mandated in child care centres administered by the corporate sector or in other private and community providers.

Curriculum improvement is fundamental to addressing success for all children, particularly during critical periods in the Early Years, when learning can be maximised. If this early advantage is missed, learning may be much slower, more difficult, and more expensive, in social and economic terms, to revisit in later life.

(South Australian Department of Education, 2004)

Most States and Territories have now developed some sort of early childhood curriculum framework but its use is optional. Further, these frameworks do not normally span both child care and preschool or kindergarten and so there is no expectation of consistency of participation, experience or outcomes across programs. Experiences and outcomes vary dramatically from service to service.

In New Zealand, a national early childhood curriculum *Te Whariki* is generally acknowledged as creating a consistent approach to learning across early childhood settings although there are concerns that it might limit expectations and outcomes for children from Maori and Pasifika communities (Rata, 2004). *Te Whariki* has been proposed as a model for developing a national early childhood curriculum framework for Australia. However, while there are some moves toward developing cohesive approaches to curricula and pedagogy in the pre-compulsory early childhood years, there is considerable resistance to developing and implementing cross-service curricula or monitoring children's outcomes within States, let alone nationally.

The need for integrated, collaborative planning

With clear evidence of the importance of the early years to later academic outcomes, especially in literacy (Rowe, 2005) and in numeracy (Thomson et al., 2005) outcomes and school retention rates, it is critical that early childhood education get it right. As Ainley and Fleming (2000), Rowe (2005) and others have indicated, attention must be paid to developing strong foundations for literacy in the preschool years as literacy development at the end of Year 1 and Year 2 is strongly influenced by literacy skills developed in the early years.

The disarray in early childhood services and Australia's questionable commitment to young children's care and early education has been raised in many contexts. The Kirby report in Victoria (2001), the Australian Education Union (2004) report on preschool education, and many respondents during the *National Early Childhood Agenda* consultative period all condemned the confusing array of early childhood services, policies and practices, the lack of a national framework, coordination and communication at the system level, and inequities in access, inputs and outcomes across the early childhood field.

At the core of a good preschool learning program is building thinking and problem-solving skills, imagination and creativity and ensuring that every child has the social, cognitive and emotional capacity to optimise learning in the school years. Good preschool programs are not about prescriptive school readiness or early academic skills programs, although preparation for school is important. Strong, responsive learning programs come with careful planning for and investment in quality pedagogy. It is surprising and worrying to think that any educational sector could be entrusted to undertake this key national task without the benefit of a carefully constructed, research-supported curriculum.

In Australia there is presently no national statement of commitment to children or of 'desired goals and desired outcomes against which to measure overall success of delivery of programs and policies in early childhood' (*National Agenda for Early Childhood*, 2004, p. 8). In short, there is *no* clearly articulated national vision or strategy for early childhood provision, let alone a national curriculum framework. Around the country, there are many policy statements and positions acknowledging the holistic ways in which children develop and learn and advocating

the need for strong foundations for learning in the school years. But these are not necessarily translated to action. As Professor Fiona Stanley (2004b) has said, 'it is time for national reconceptualisation' of what is needed to improve outcomes for all children, and especially those who have been traditionally least heard and worst served.

Building new generation early childhood provision

Nevertheless, there are hopeful signs. Consultations around the *National Agenda for Early Childhood* and the Australian Government initiative *Stronger Families, Stronger Communities* have galvanised interest in national perspectives on early childhood, empowering families and building social capital. Despite the recognition of the key role early learning plays in child wellbeing and school success, the pro-family policies of successive governments and the reality of both parents participating in the workforce, there is no universal provision of early education and care for children below school age and no agreed plan on how to achieve these goals.

Reconceptualising the early childhood care and education agenda is not going to be easy given the complexity of the field and the multiplicity of legislation, regulation, policy, funding and stakeholders, not to mention family and community diversity. While building on strengths within the system is important, there needs to be thoughtful planning around the following:

- a nationally cohesive approach to early childhood care and education provision delivered within an integrated service model
- agreement on developmental and learning outcomes to be promoted and monitored within a national curriculum framework
- development of an associated system of national credentialing for early childhood staff
- strengthening of the quality assurance system across all early childhood services.

A cohesive approach would have a two-fold benefit: first, as a vehicle for embracing and integrating the care and education sectors to provide seamless early childhood services; secondly, to provide more equitable access, experiences and outcomes for all children.

Issues and visions for the future

The current wave of community and government interest in early childhood education and care has many of the hallmarks of previous interest spikes, though with some new twists. Projected labour shortages as baby boomers leave the workforce and the search for new ways of keeping mothers with young children in employment in order to retain the national skill base, have invigorated thinking about early childhood provision and quality. Concomitantly, there is concern about children's preparedness for school and later academic performance and wellbeing (Sayers, 2004).

Deciding how to translate this evidence and goodwill into genuine commitment, strategic policies and commensurate funding is a major challenge for policy makers and funding bodies. If Australia's entrenched care–education divide and multiplicity of socioeconomically differentiated early childhood education programs are to be dismantled, new ways of building on existing services and investments and better coordination of efforts must be developed and actioned. More holistic, integrated service delivery, blending care and education and family support services holds the key to better outcomes for children. But, while 'full service hubs', schools as 'extended' services and 'one-stop-shops' are frequently discussed, they are rarely operationalised, even though sharing infrastructure costs across a range of services might help reduce costs and there would be long-term cost benefits in terms of improved social and educational outcomes.

Quality, integrated early childhood programs are expensive, but as highlighted here the importance of rich, elaborated environments in optimising children's experiences and outcomes is compelling. Given the complex needs of 21st century families, there must be a continuum of care and education to optimise developmental outcomes while simultaneously accommodating families' work schedules.

While many improvements to the quality of early childhood care have been achieved through national quality assurance processes, such as the Quality Improvement and Accreditation Scheme (QIAS) and child care is more readily available, access to early childhood programs is still problematic. Currently early childhood demand exceeds supply and is not necessarily responsive to families' needs. Many families must use several care types plus various workplace flexibility arrangements to accommodate work schedules, yet lack of continuity and transitions between care providers can present problems for children (Dykstra, Duval, Williams DiMilo, & Gratz, 1997). To address these problems and achieve the vision will require careful planning, thoughtful policies and additional resources.

Closing the funding gap

Whichever way the situation is viewed, less is spent on early education and care than on other areas of education. A recent US report, *Early Learning Left Out* (2004) demonstrates the huge investment gap in funding between early childhood and other education sectors. The report demonstrates an average public investment per child of US\$740 for children before school; US\$5410 for primary and secondary education; and US\$3664 for higher education (Child & Family Policy Center and Voices for America's Children, 2004).

In Australia, Tiffen and Gittins (2004) and the Productivity Commission Reports (2004, 2005, 2006) have indicated a similar disparity in expenditure between early childhood and other educational services. Highlighting comparatively low public funding of children's services is not to suggest that K–12 schools or higher education are adequately funded, but that children's services lag way behind. Australian government 2003–04 expenditure per child aged 0–12 in children's services ranged from \$413 per child in Western Australia to \$755 per child in Queensland (Productivity Commission, 2005, p. 14.31). That government child care expenditure is much lower than in the schooling sector is not surprising given the lack of universal early childhood provision, the large commercial component of child care, the low establishment and operational costs of home-based Family Day Care, and the relatively low overall levels of staff training, resulting in lower staffing costs.

The financing of early childhood care and education has long been contentious. As outlined in Section 2 of this review, the current system of funding via fee subsidies is tied to individual families and is dependent on parent income and centre-related eligibility. While this approach is low cost to government, and theoretically enables choice for families and competition between providers, choice can be limited or non-existent as overall demand tends to exceed supply. Further, even if there is a choice of service, few parents are in the position to assess quality indicators, especially staff qualification and competence, program quality, and outcomes for children.

By default, a trend is emerging for child care to become a welfare option. Already, the strong segregation of communities by socioeconomic status, especially in outlying suburbs of major cities and in regional and remote areas, means that many early childhood services have already developed a largely welfare orientation. Some services now cater almost exclusively for low-income families eligible for full subsidies. The only rationale for continuing the care–education divide is the increased cost of funding a different model. Differentiating the care and education functions of child care and preschools or kindergartens lessens pressure to provide universal, high quality, seamless early childhood services, requiring costly, qualified early childhood educators.

Subsidising and promoting low-cost care options such as home-based Family Day Care and failing to impose higher standards of training and qualification for child care staff contains costs. Such strategies reduce the need for financing child care from public sources. Provision of capital costs and operational funding for salaries, infrastructure maintenance and resources, as in the public schools, would be much more expensive for governments. However, it should also be said that the introduction of more robust supply-side operational funding would provide greater control over service location, staff training and qualifications, curriculum, outcomes

for children, and evaluation and quality assurance. Savings would be made, with the adoption of such strategies.

When a cost analysis of a different operational model is undertaken, one which values a child population that learns better and is able to achieve better employment outcomes and thus contribute to the economic capacity of the nation, the greater expenditure needed for each child in the early years is well justified. Under this model, child care centres are considered important in building community partnerships and cultural strength, viability and continuity. They are then viewed as social capacity building, a cost-effective means of improving labour market participation, reducing welfare dependence, and supporting long-term reductions in crime. But with few models or evaluative studies of effectiveness in Australian contexts, their potential as early learning environments remains largely untested. As in the school sector, operational funding and relevant regulatory requirements for early childhood services would enable economies of scale in planning and administration, and standardisation of staff training, salaries and working conditions across jurisdictions. Greater cohesiveness across the early childhood sector would assist the development and monitoring of more nationally consistent learning programs for young children and monitoring of developmental outcomes.

Setting research priorities

Much of the contemporary literature considered in this review paper focuses on the quality of early childhood education and care environments, determinants of quality, and the impact of early childhood experiences and environments on aspects of children's social and cognitive functioning. Ways of ascertaining quality within changing governance and policy contexts is a major issue for the early childhood sector and the community. To date, there is still little Australian data on the extent to which specific early childhood programs or practices within centres result in demonstrably better outcomes for children. But many small-scale studies, together with findings from larger studies, such as the longitudinal study *Growing up in Australia* (Australian Institute of Family Studies), are providing data on factors such as parenting, family relations and functioning, schooling, health, and early childhood care and education on child development, health and wellbeing.

Research and evaluation are key components of the determination of quality, but many recent research initiatives have been situated within universities or other local contexts and have limited wider applicability. This limited research focus is not surprising given the fragmented state of early childhood education and care, the multiplicity of players within the sectors, the small-scale nature of research groups, and the modest funding available.

Where research exists, the lengthy time from conception to publication means that results can rapidly lose relevance or they are not used within context. So, although there has been periodic interest in determining the impact and effectiveness of early childhood provision and programs, a clear national research agenda situated within a strategic framework would be necessary to inform policy development, assess effectiveness and improve outcomes for children. Critical and rigorous investigation of early childhood activities at a local, state and national level is overdue if we are to sharpen service quality and enhance outcomes. In particular, we need to determine which programs work, why and for which children and then act on this information.

Concluding comments

Superficially, Australia has apparently sound early childhood education and care provision and many children have excellent early childhood care and education opportunities. Many however, have mediocre to poor experiences; others miss out altogether. Indeed, a close look at the reality demonstrates that equity of experience and outcome is a long way off.

There is no comprehensive, national early childhood care and education provision. Rather, there is a two-tiered, but multi-dimensional system of 'care' and 'education' with some blurring of boundaries in some areas. Despite the internationally acclaimed QIAS for child care, variation

in provision, orientation and quality across the sector at the local, state and national levels is considerable. There is little consistency and continuity between learning programs from one centre to the other, no agreed or desirable learning outcomes, considerable variation in staff profiles and large numbers of staff with minimum educational qualifications and limited professional development opportunities. There are serious staff shortages and high turnover, inconsistencies and indecision about the appropriate credentials for early childhood educators especially in child care, and a confusing array of Industrial Awards and staff classifications that result in low salaries and impact negatively on staff recruitment, retention and progression.

The substantial and positive impacts of quality early childhood care and education on children's social and cognitive development are well established. Quality programs are strong predictors of later social and educational outcomes and also have important social and economic impacts on families. For vulnerable families in particular, access to high-quality early childhood programs improves employment options, increases tax contributions, and reduces reliance on expensive public health and social services.

Australian early childhood services for children 0–5 years which have strong care *plus* education programs stand out internationally as models of best practice. Most traditional community or school-based sessional preschools and kindergartens provide excellent learning programs and there are many small, specialised services which are responsive and effective. However, across the board, early childhood care and education services are insufficient, fragmented, underfunded and inconsistent. There is no universal planned, systematic provision; rather, services have developed in an ad hoc way resulting in a patchwork of provision and variable quality. Too many families and children miss out.

As shown in this review, there is now a substantial and well-accepted body of evidence on *what is important* and *what matters* to children and to families. At the heart of this evidence are five interrelated themes: (1) access and participation, (2) curriculum and pedagogic quality, (3) staff competence, qualifications and quality, (4) equity, and (5) affordability and funding. These issues must be pivotal to any future discussions about early childhood provision, quality and equity.

Australia is at a crossroads when it comes to early childhood care and education services. Current provision is highly contingent on a complex web of historical, institutional, government, and economic factors. A systematic, strategic approach and entitlement to comprehensive, integrated, quality early childhood education and care services for all children is required urgently. Unless this happens, the existing care and education dichotomy will become further entrenched with inevitable negative consequences, especially for the most vulnerable and disadvantaged communities. The developing trend for welfare-oriented child care for poor and lower income families and educationally oriented preschools and kindergartens for middle-income and more affluent families will further polarise academic outcomes already differentiated along socioeconomic and geographic lines.

As a first step to close the care–education gap, the current complexity of planning, regulations and funding must be simplified to provide a better coordinated, whole-of-government early childhood strategy. Work completed for the *National Agenda for Early Childhood*, and the *Stronger Families, Stronger Communities* programs, together with the existing QIAS, plus the population profiles emerging from the *Australian Early Development Index* work (2005) and initiatives from within education authorities should be distilled and used as a basis for cross-sectorial, inter-governmental discussion and planning to develop and affirm a national commitment to quality and universal early childhood care and education and targeted provision for developmentally vulnerable groups. From this could grow a coherent, long-term national action plan and timeline to develop and implement an integrated, well-funded, regulated and managed system of early childhood education and care with clear goals, priorities and outcomes. But, for this to happen, Commonwealth–State agreements on legislation and funding processes will be required to leverage stakeholder collaboration. Rationalising the range of services, layers of tradition, and the tapestry of policy, regulations and funding patterns will not be easy. But it is central to improving early childhood access, affordability, quality and outcomes for future generations of young children; those who constitute the future of Australia.

References



- Ahnert, L., Gunnar, M. R., Lamb, M. E., & Barthel, M. (2004). Transition to child care. *Child Development*, 75, 639–650.
- Ainley, J., & Fleming, M. (2000). *Learning to read in the early primary years*. Melbourne: ACER.
- Ainley, J., & Fleming, M. (2003). *Five years on. Literacy advances in the primary years*. Melbourne: Catholic Education Commission.
- Almy, M. (1975). *The early childhood educator at work*. New York: McGraw Hill.
- Almy, M. (1982). Day care and early childhood education. In E. Zigler & E. Gordon (Eds), *Daycare: Scientific and social policy issues* (pp. 476–495). Boston, MA: Auburn House.
- American Association of Colleges for Teacher Education. (2004). *The Early Childhood Teacher Challenge*. A White Paper of the American Association of Colleges for Teacher Education, June 2004.
- Andersson, B. E. (1992). Effects of day care in cognitive and socioemotional competence of thirteen year old Swedish school children. *Child Development*, 63, 20–36.
- Arnett, J. (1989). Caregivers in day care centres: Does training matter? *Journal of Applied Developmental Psychology*, 10, 522–541.
- Ashton, J., & Elliott, A. (1994, November). *Student teacher perceptions of early childhood care and education issues*. Paper presented at the Australian Association of Research in Education Annual Conference, Hobart, Tasmania.
- Auditor General. (1994). *Performance Audit Report, Children's Services*. Sydney: Audit Office of NSW.
- Australian Bureau of Statistics. (1997). *Australian Standard Classification of Occupations*, Cat. No. 1220.0. Canberra: ABS.
- Australian Bureau of Statistics. (2001). *Community Services Australia*, 8696.0. Canberra: ABS.
- Australian Bureau of Statistics. (2003a). *Child Care*, 4402.0. Canberra: ABS.
- Australian Bureau of Statistics. (2003b). *Schools 2002*. 4221.0. Canberra: ABS.
- Australian Bureau of Statistics. (2003c). *Year Book Australia*. Canberra: ABS.
- Australian Bureau of Statistics. (2003d). *Australian demographic statistics*, 3101.0. Canberra: ABS.
- Australian Bureau of Statistics. (2004a). *Australian Social Trends 2004*, 4102.0. Canberra: ABS.
- Australian Bureau of Statistics. (2004b). *Schools 2003*, 4221.0. Canberra: ABS.
- Australian Bureau of Statistics. (2005). *Population by age and sex*, 3201.0. Canberra: ABS.
- Australian Bureau of Statistics. (2006a). *Child Care*, 4402.0. Canberra: ABS.
- Australian Bureau of Statistics. (2006b). *Schools 2005*, 4221.0, Canberra: ABS.

- Australian Council for Trade Unions. (2003). *A fair Australia: Child care policy*. Melbourne: ACTU.
- Australian Council of Social Services. (2006). *Fair start: A ten point plan for early childhood education and care*. ACOSS Information 383, February 2006.
- Australian Education Union. (2004). *National preschool education enquiry report: For all our children*, Melbourne: AEU.
- Australian Government Task Force on Child Development, Health and Wellbeing. (2003). *Toward a National Agenda. What you told us*. Canberra: FACS, Australian Government Task Force on Child Development, Health and Wellbeing.
- Australian Institute of Criminology. (2004). Developmental and early intervention approaches to crime prevention. *Crime Reduction Matters*. No 4, July. Canberra: Australian Institute of Criminology.
- Australian Institute of Family Studies. *Growing up in Australia: Longitudinal Study of Australian Children*. Retrieved from <http://www.aifs.gov.au/growingup/home.html> on 4 September 2006.
- Australian Institute of Health and Welfare. (2002a). *Trends in long day care services for children in Australia 1991–99*. Canberra: AIHW.
- Australian Institute of Health and Welfare. (2002b). *Australia's health 2002*. Canberra: AIHW. Retrieved from <http://www.aihw.gov.au/publications/aus/ah02/>.
- Banasich, A. A., Brooks-Gunn, J. & Clewell, B. C. (1992). How do mothers benefit from early intervention programs? *Journal of Applied Developmental Psychology*, 13, 311–361.
- Barblett, L. & Maloney, C. (2002a). Proving quality or improving quality: Who's minding the shop? *Australian Journal of Early Childhood*, 27(1), 14–17.
- Barblett, L. & Maloney, C. (2002b). *Describing standards for early childhood teachers: Moving the debate forward to the National level*. Paper presented at the AARE Conference, Brisbane.
- Barnett, W. S. (1995). Long term effects of early childhood programs on cognitive and school outcomes. *Future of Children*, 5(3), 25–50.
- Barnett, W. S. (2003a). Better teachers, Better preschools: Student achievement linked to teacher qualifications. *Preschool Policy Matters*, 2. New Brunswick, NJ: NIEER.
- Barnett, W. S. (2003b). Low wages = Low quality: Solving the real preschool teacher crisis. *Preschool Policy Matters*, 3. New Brunswick, NJ: NIEER.
- Belsky, J. (1988). The effects of infant day care reconsidered. *Early Childhood Research Quarterly*, 3(3), 235–272.
- Bennett, J. (2002). *Data needs in early childhood education and care*. Paris: OECD.
- Biddulph, S. (2006). *Raising babies: Should under threes go to nursery?* London: Harper Thorsons.
- Blair, C. (2002). Early intervention for low birth weight pre-term infants. The role of negative emotionality in the specification of effects. *Development and Psychopathology*, 14, 311–332.
- Blenkin, G. & Hutchin, V. (1998). Action research, child observations and professional development. Some evidence from a research project. *Early Years*, 19(1), 62–75.
- Bowman, B., Donovan, S. M., & Burns, S. (Eds.) (2001). *Eager to learn: Educating our preschoolers*. Washington DC: US Department of Education.
- Boyd, B. J., & Schneider, N. I. (1997). Perceptions of the work environment and burnout in Canadian child care providers. *Journal of Research in Childhood Education*, 11(2), 171–180.
- Brazelton, T. B. (1986). Issues for working parents. *American Journal of Orthopsychiatry*, 56(1), 14–25.
- Bredenkamp, S., & Rosegrant, T. (Eds) (1992). *Reaching potentials. Appropriate curriculum and assessment for young children*. Washington, DC: NAEYC.
- Brennan, D. J. (1990). *Women, the state and the politics of child care*, PhD thesis. University of Sydney.
- Brennan, D. J. (1994). *The politics of child care*. Melbourne: Cambridge University Press.
- Broberg, A., Wessles, H., Lamb, M. E., & Hwang, C. P. (1997). Effects of day care on the development of cognitive abilities in 8 year olds. A longitudinal study. *Developmental Psychology*, 33, 62–69.
- Brooks-Gunn, J. (2003). Do you believe in magic? What we can expect from early childhood intervention programs. *Social Policy Report: Giving Child and Youth Development Knowledge Away*, 17, 3–14.

- Brooks-Gunn, J., Han, W. J., & Waldfogel, J. (2002). Maternal employment and child cognitive outcomes in the first three years of life: the NICHD Study of Early Childhood Care. *Child Development*, 73, 1052–1072.
- Burchinal, M., Campbell, F. A., Bryant, D. M., Wasik, B. H., & Ramey, S. L. (1997). Early intervention and mediating processes in cognitive performance of children of low income American African families. *Child Development*, 68, 935–954.
- Burchinal, M., Roberts, J., Nabors, L., & Bryant, D. (1996). Quality of centre child care and infant cognitive and language development. *Child Development*, 67, 606–620.
- Burton, A., Whitebrook, M., Brandon, R., Maher, E., Young, M., Bellm, D., et al. (2002). *Estimating the size and components of the US child care workforce and caregiving population*. Washington, DC: Centre for the Child Care Workforce.
- Cairney, T. (2000). Beyond the classroom walls: The rediscovery of the family and community as partners in education. *Educational Review*, 52(2), 163–174.
- Cairney, T., & Munsie, L. (1995). Parent participation in literacy learning. *The Reading Teacher*, 48(5).
- Cairney, T. H., & Ruge, J. (1999). Community literacy practices and schooling: towards effective support for students. *Queensland Journal of Educational Research*, 15(1), pp. 25–33.
- Campbell, F. A., Ramey, C. T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, 6(1), 42–57.
- Cannella, G. S. (1997). *Deconstructing early childhood education: Social justice and revolution*. New York: Peter Lang.
- Carnegie Task Force on Learning in the Primary Grades. (1996). *Years of promise: A comprehensive learning strategy for America's children*. New York: Carnegie Corporation of New York.
- Carnegie Task Force on Meeting the Needs of Young Children. (1994). *Starting points: Meeting the needs of our youngest children*. New York: Carnegie Corporation of New York.
- Centre for Community Child Health. (2005). *The Australian Early Development Index. Building better communities for children. Community results 2004–2005*. Canberra: FACS.
- Child & Family Policy Center & Voices for America's Children (2004). *Early Learning Left Out: An examination of public investment in education and development by child age*. Washington, DC: Child & Family Policy Center & Voices for America's Children.
- Clarke-Stewart, A. (1982). *Day care*. Cambridge, MA: Harvard University Press.
- Commonwealth Child Care Advisory Council's (CCCAC) report, *Child Care: Beyond 2001* (September 2001). Canberra: Commonwealth of Australia.
- Currie, J. & Duncan, T. (1995). Does Head Start make a difference? *The American Economic Review*, 85, 341–364.
- Currie, J. & Thomas, D. (1998). *School quality and the long term effects of Head Start*. National Bureau of Economic Research Working Paper No. w6362. Retrieved from <http://www.nber.org/papers/w6362>.
- Dahlberg, G., Moss, P. & Pence, A. (1999). *Beyond quality in early childhood education and care. Post modern perspectives*. Philadelphia: Falmer.
- Darling-Hammond, L. (2000). Teacher quality and student achievement. A review of state policy evidence. *Education Policy Analysis Archives*, 8(1), 1–49.
- Department of Communities. (2006). *Queensland Government*. Retrieved from communities.qld.gov.au/family/earlyyearsstrategy/index.html.
- Department of Education, Science and Training. (2003). *Australia's teacher: Australia's future*. Canberra: DEST, p. xix.
- Department of Education and Children's Services. (2005). *The virtual village: Raising a child in the new millennium*. Adelaide: South Australian Department of Education.
- Department of Family and Community Services. (1993). *National Standards for Centre-based Long Day Care*. Canberra: FACS.
- Department of Family and Community Services. (1999). *Child Care in Australia. An update of key statistics relating to the Commonwealth Child Care Program*. Canberra: FACS.

- Department of Family and Community Services. (2003a). *2002 Census of Child Care Services*. Canberra: FACS.
- Department of Family and Community Services. (2003b). *Australian Government report on the April 2003 Child Care Workforce Think Tank*, Canberra: FACS. Retrieved from [http://www.facs.gov.au/internet/facsinternet.nsf/vIA/think_tank/\\$file/think_tank_public_report.rtf](http://www.facs.gov.au/internet/facsinternet.nsf/vIA/think_tank/$file/think_tank_public_report.rtf) on 6 July 2004.
- Department of Family and Community Services. (2004, June). *Child Care News. Special Edition*. Canberra: FACS.
- Department of Family and Community Services. (2004). *Review of the Early Intervention Parenting Program and good beginnings prototypes*. Canberra: FACS.
- Department of Family and Community Services. (2005). *2004 Census of Child Care Services*. Canberra: FACS.
- Devine, M. (2005). Yummy mummies expose desperate child care need, *Herald Sun*, 13 February 2005.
- Doig, B., McRae, B. & Rowe, K. (2002). *A good start to numeracy*. Camberwell: ACER Press.
- Dykstra, J., Duval, J., Williams DiMilo, R. & Gratz, R. R. (1997). It's hard going to two schools. Helping children adjust to before and after school care. *Early Childhood Development and Care*, 135, 79–87.
- Economic Planning Advisory Commission Report. (1996). *Future Child Care Provision in Australia*. Canberra: Australian Government Printing Service.
- The Effective Provision of Pre-school Education (EPPE) studies in the UK*. Retrieved from <http://www.ioe.ac.uk/schools/ecpe/eppe/index.htm>.
- Elliott, A. (1990). Mrs Crowley: The first kindergartener. *Unicorn*, 16(2), 129–132.
- Elliott, A. (2000a). Putting brain research to work in the classroom. *Every Child*, 6(1), p. 3.
- Elliott, A. (2000b). Shaping early childhood futures. *Every Child*, 6(3), p. 3.
- Elliott, A. (2000c). Visions for children, families and communities. *Every Child*, 6(2), p. 3.
- Elliott, A. (2000d). *Early childhood teacher education students' career destinations and aspirations. Why child care is not on the agenda*. Invited presentation to the NSW Enquiry into Early Childhood Staffing. Sydney.
- Elliott, A. (2001). Effects of sociocultural discourses on science and technology teaching in early childhood education. (pp. 393–408). In J. Hayden (Ed.) *Landscapes in early childhood education*. NY: Peter Lang.
- Elliott, A. (2002). Advocating for all children and families. *Every Child*, 8(1), p. 2.
- Elliott, A. (2004a). Building capacity and strengthening early childhood provision, *Every Child*, 10(2), p. 2.
- Elliott, A. (2004b). *Who cares? Shaping early childhood policy and practice in Australia*. Paper presented at the XXIV World Congress of OMEP. Melbourne, July.
- Elliott, A. (2006). Universal Early Education. *Directions in Education*, 15(9), pp. 1–2.
- Elliott, A., & Hall, N. (1990). Computer based mathematical experiences in an early intervention program. *Australian Journal of Early Childhood*, 15(3), 37–45.
- Elliott, A., & Hall, N. (1997). Scaffolding young children's learning in computer supported environments. *Journal of Computing in Childhood*, 8(2/3), 187–198.
- Elliott, A., & Irvine, J. (1984). Towards professionalisation: New directions in early childhood training. *Australian Journal of Early Childhood*, 9(1), 31–35.
- Elliott, A., & Lindsay, A. (1996). Preschool education in Australia. A. K. MacDougall (Ed.) *The Australian Encyclopaedia*. Vol. 3, 6th Ed. 1161–1164. ISBN 1862 760144.
- Elliott, R. (2003a). Sharing care and education. Parents' perspectives. *Australian Journal of Early Childhood*, 28(4), 14–21.
- Elliott, R. (2003b). *The book is open but you can't turn the page. Parents' perceptions of early childhood service quality*. PhD Thesis. University of Western Sydney.
- Ellis, L. (2005). Balancing approaches: Re-visiting the educational psychology research on teaching students with learning difficulties. *Australian Education Review*, No 48.

- Esler, A. (2001). *Children at the center: Child development through evidence based practice*. Unpublished Doctor of Philosophy, University of Minnesota.
- Family Assistance Office. Australian Government. Retrieved from <http://www.familyassist.gov.au> on 12 March 2006.
- Farron, D.C. (2000). Another decade of intervention for children who are low income or disabled: What do we know now? In J. P. Shonkoff & S. J. Miesels (Eds), *Handbook of early intervention*. 2nd ed., pp. 510–548. Cambridge, UK: Cambridge University Press.
- Ferguson, R. (1991). Paying for public education. New evidence in how and why money matters. *Harvard Journal of Legislation*, 28(2), pp. 465–498.
- Financial Review*. Child care not all child's play. 22 June 2004.
- Fleer, M. (2000). *An early childhood research agenda. Voices from the field*. Canberra: DEST.
- Fuerst, J. S., & Fuerst, D. (1993). Chicago's experience with an early childhood program: The special case of the Child Parent Center Program. *Urban Education*, 28(1), 69–96. EJ 463 446.
- Garces, E., Thomas, D., & Currie, J. (2000). *Longer term effects of Head Start*. Cambridge, MA. National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers> on 10 May 2002.
- Gifford, J. (1993). *Early childhood education: What future?* Canberra: Australian College of Education.
- Gilliam, W. S., & Zigler, E. F. (2003). *Evaluating early childhood programs. Improving quality and informing policy. Zero to Three*, 23(6), pp. 6–13.
- Goodfellow, J. (2003). Grandparents as regular care providers. *Every Child*, 9(3), pp. 8–9.
- Goodfellow, J., & Lavery, J. (2003). Grandparents supporting working families. Satisfaction and choice in the provision of care. *Family Matters*, 66, 14–19.
- Gray, M., & Sanson, A. (2005). Growing up in Australia. The longitudinal study of Australian Children. *Family Matters*, 72, Summer, pp. 4–9.
- Grey, A. (1999). A vision for quality in early childhood education. *Australian Journal of Early Childhood*, 24(3), 1–8.
- Gullo, D. F., & Burton, C. B. (1993). The effects of social class, class size and pre-kindergarten experience on early school adjustment. *Early Child Development and Care*, 88, 45–52.
- Harrison, L., & Ungerer, J. (2002). Maternal employment and infant–mother attachment security at 12 months postpartum. *Developmental Psychology*, 38, 758–773.
- Harrison, L. J., & Ungerer, J. (2005). What can the Longitudinal Study of Australian children tell us about infants' and 4 to 5 year olds' experiences of early childhood education and care? *Family Matters*, 72, Summer, pp. 26–35.
- Hattie, J. (2003). *Teachers make a difference: What is the research evidence?* Keynote address at the ACER Research Conference, Melbourne, October.
- Hawthorn, W. (1998). *Professional development and practice: a study of early childhood teachers of mathematics*, PhD Thesis. Edith Cowan University.
- Head Start Bureau (1998). *Head Start 1998*. Fact Sheet. Washington, DC: Head Start Bureau.
- Heckman, J. J. (2006). *Investing in disadvantaged young children is an economically efficient policy*, paper presented at the Committee for Economic Development/Pew Charitable Trust's 2nd Annual conference on Building the Economic Case for Investments in Preschool. Retrieved from www.ced.org/projects/prek.shtml#2006conference on 12 March 2006.
- Heckman, J. J., & Krueger, A. B. (2003). *Inequality in America. What role for human capital?* Cambridge, MA: MIT Press.
- Heckman, J. J., & Masterov, D. (December 2000). *Early childhood education for all. A wise investment*. Recommendations from the Economic Impacts of Child Care and Early Education: Financing Solutions for the Future. Boston, MA.
- Helburn, S. W. (1995). *Cost, quality and child outcomes in child care centers*. Denver: University of Colorado.
- Holt, A. (2004). *Today Show*, Channel 9. 23 August 2004.
- Hyson, M. (2003a). Putting early academics in their place. *Educational Leadership*, 60(7), 20–23.
- Hyson, M. (2003b). *Preparing early childhood professionals NAEYC standards for programs*, Washington, DC: NAEYC.

- Ingvarson, L. (1998). Professional development as the pursuit of professional standards: The standards-based professional development system. *Teaching and Teacher Education*, 14(1), 127–140.
- Ingvarson, L. (2002). *Building a learning profession*, Canberra: ACE.
- Janus, M., & Offord, D. (2000). Readiness to learn at school. *Canadian Journal of Social Policy*, 1, 71–75.
- Jordan, B. (1999). Technological tools supporting the scaffolding of learning. *NZ Research in Early Education*, (2), 53–66.
- Karoly, L. A., Greenwood, P. W., Sohler Everingham, S. M., Hoube, J., Kilburn, M. R. Rydell, C. P. Sanders, M., & Chiesa, J. (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions*. Santa Monica, CA: RAND Corp.
- Karoly, L. A., Kilburn, M. R., & Cannon, J. S. (2006). *Early childhood intervention: Proven results, future promise*. Santa Monica, CA: RAND Corp.
- Keary, A. (2000). Changing images of mothers and mothering. *Australian Journal of Early Childhood*, 25(2), 13–17.
- Kelly, J. (1986). Day care: An unfortunate necessity or a desirable community resource. *Australian Journal of Early Childhood*, 11(1), 3–9.
- Kresh, E. (1998). The effects of Head Start: What do we know? *National Head Start Association Research Quarterly*, 1(4), 112–123.
- Lamb, M., Sternberg, K. J., Hwang, P., & Broberg, A. (1992). (Eds). *Child care in context*. Hillsdale, NJ: Erlbaum.
- Lamb, M. E., & Sternberg, K. J. (1990). Do we really know how day care affects children? *Journal of Applied Developmental Psychology*, 11, 351–379.
- Lazar, I., & Darlington, R. (1982). Lasting effects of early education: A report from the Consortium for Longitudinal Studies. *Monographs for the Society for Research in Child Development*, Serial No. 195.
- Lee, V. E., Brooks-Gunn, J., Schnur, E., & Liaw, F. R. (1990). Are Head Start effects sustained? A longitudinal follow-up comparison of disadvantaged children attending Head Start, no preschool, and other preschool programs. *Child Development*, 61, 495–507.
- Linke, P. (2000). Infant brain research. What it is and what does it mean? *Every Child*, 6(1), 4–5.
- Love, J. M., Kisker, E. E., Ross, C. M., Schochet, P. Z., Brooks-Gunn, J., & Paulsell, D. (2002). *Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start*. Washington, DC: US Department of Health and Human Services.
- Love, J. M., Logue, M. E., Trudeau, J. V., & Thayer, K. (1992). *Transitions to Kindergarten in American schools: Final report of the National Transition Study*. Washington, DC: US. Department of Education.
- Lynch, R. G. (2005). Early childhood investment yields big payoff. *Policy Perspectives*. San Francisco, CA: WestED.
- Maher, E., & Goldfeld, S. (2003). *Literature review of school readiness and the Early Development Instrument*. Paper presented at the Transition to School. The health, development and wellbeing of Australia's children at school entry. National Invitational Meeting, Melbourne, August 2003.
- Makin, L., Hayden, J., & Diaz, C. (2000). High quality literacy programs in early childhood classrooms. *Childhood, International Focus Issue*, 368–373.
- Margetts, K. (2002). The developing child in today's world. Issues in care and education. *Educare News*, July, 10–13.
- Masters, G. (2004). What makes a good school? *Education Review*, 14(5), 11.
- Masters, G., & Forster, M. (2005). Judgement day. *The Age*, 5 September.
- McCain, M., & Mustard, E. (1999). *Reversing the real brain drain. Early years study*. Toronto: Canadian Institute of Advanced Research.
- McCartney, K. (1984). The effect of quality of day care. Effects of child environment upon children's language development. *Developmental Psychology*, 20, 244–260.
- McGaw, B. (2006). *The Australian*, 29 March 2006, p. 1.

- McKey, R. H. (2003). *The Head Start Family and Child Experiences Survey. What are we learning about program quality and development*. Retrieved from <http://www.acf.hhs.gov/programs/> on 12 March 2004.
- Meagher, G. (2004, May). Do Australians want a private welfare state? Are they getting one anyway? The Drawing Board. *Australian Review of Public Affairs Digest*. Sydney.
- Meisels, S., & Shonkoff, J. (2000). Early childhood intervention: A continuing evolution. In J. Shonkoff & S. Meisels (Eds.), *Handbook of early childhood intervention*, pp. 3–34 (2nd edition). New York: Cambridge University Press.
- Melhuish, E. C. (2003). *A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds*. London: National Audit Office.
- Ministry of Education. (1996). *Te Whariki*. NZ: Ministry of Education.
- Mitchell, L., & Cubey, P. (2003). *Characteristics of professional development linked to enhanced pedagogy and children's learning in early childhood settings*. Report for the New Zealand Ministry of Education, Wellington: NCER.
- Mosteller, F., Light, R. J., & Sachs, J. A. (1996). Sustained inquiry in education. Lessons from skill groupings and class size. *Harvard Education Review*, 66(4), 797–842.
- Mould, C. (1998). The influences of researcher–teacher collaboration on the effectiveness of early learning of four year olds in schools in England. *European Early Childhood Education Research*, 6(1), 19–35.
- Mustard, J. F. (2000). *Early childhood development. The base for a learning society*. Paper presented to the HRDC/OECD Meeting, Ottawa, 7 December 2000. Paris: OECD.
- National Association for the Education of Young Children. (1982). *Early childhood teacher education guidelines*. Washington. DC: NAEYC.
- National Association for the Education of Young Children. (1987). *Developmentally appropriate practice guidelines*. Washington. DC: NAEYC.
- National Association for the Education of Young Children. (2003). *Early childhood curriculum, assessment and program evaluation: Position Statement*. Washington, DC: NAEYC.
- National Board for Professional Teaching Standards. (2003). Retrieved from <http://www.nbpts.org/nbct/directory.cfm>.
- National Childcare Accreditation Council. (2003). *Current progress of services participating in the quality assurance systems*. Sydney: NCAC.
- National Childcare Accreditation Council. (2004). *Annual Report for 2003/2004*. Sydney: NCAC. Retrieved from http://www.ncac.gov.au/pcf/pcf_dec_04_special_feature.pdf.
- National Institute for Early Education Research. (2003). *Better teachers, better preschools: Student achievement linked to teacher qualifications*. New Brunswick, NJ: NIEER.
- National Institute of Child Health and Development Early Child Care Research Network. (1997). The effects of infant child care on infant–mother attachment security: Results of the NICHD study of early child care. *Child Development*, 68(5), 860–879.
- National Institute of Child Health and Development Early Child Care Research Network. (2000a). Characteristics and quality of child care for toddlers and preschoolers. *Applied Developmental Science*, 4(3), 116–135.
- National Institute of Child Health and Development Early Child Care Research Network. (2000b). The relation of child care to cognitive and social development. *Child Development*, 71, 960–989.
- National Institute of Child Health and Development Early Child Care Research Network. (2002a). Early child care and children's development prior to school entry: Results from the NICHD study of early child care. *American Educational Research Journal*, 39(1), 133–164.
- National Institute of Child Health and Development Early Child Care Research Network. (2002b). Results of the NICHD Study of Early Childhood Care. *Child Development*, 68(5), 869–879.
- Nelson, B. (2003). *Taking schools to the next level*. Presentation to the Pursing Opportunity and Prosperity Conference, University of Melbourne, Section 3, 13 November 2003.
- Neuman, S. (1999). Books make a difference. A study of access to literacy. *Reading Research Quarterly*, 3, 286–311.
- New Zealand Government, Press Release, 8 October 2004. Retrieved from <http://www.scoop.co.nz/mason/stories/ED0410/S00031.htm> on 8 October 2004.

- New Zealand Parliament Hansard, 4 August 2004. Retrieved from <http://www.clerk.parliament.govt.nz/hansard> on 8 October 2004.
- Nicholson, J. M., & Sanson, A. (2003). *Introducing the Longitudinal Study of Australian Children*. Discussion Paper 1. Melbourne: AIFS.
- NSW Commission for Children and Young People & Commission for Children and Young People, Qld (2004). *A head start for Australia. An early years framework*. Queensland: NSW Commission for Children and Young People & Commission for Children and Young People.
- Organization for Economic Co-operation and Development. (2001). *Starting strong: Early childhood education and care*. Paris: OECD.
- Peisner-Feinberg, E., Burchinal, M., Clifford, R., Culkin, A., Howes, C., Kagan, S., et al. (2000). *The children of the cost, quality and outcomes study go to school. Technical Report*. Chapel Hill: University of North Carolina, Frank Porter Graham Child Development Centre.
- Perry, R. (2000). *Early childhood numeracy*. Melbourne: Australian Association of Mathematics Teachers.
- Piaget, J. (1963). *The origins of intelligence in children* (M. Cook, Trans.) New York: Free Press. Original work published 1932.
- Pocock, B. (2004). *Work and family futures. How young Australians plan to work and care*. Discussion Paper 66. Canberra: The Australia Institute.
- Pramling, I. P. (1996). Upgrading the quality of early childhood education: Sweden. In P. S. Klein (Ed.), *Early intervention. Cross cultural experiences with a mediational approach*. New York: Garland Publishing.
- Press, F., & Hayes, A. (2000). *OECD thematic review of early childhood education and care policy. Australian background report*. Canberra: DETYA & FACS.
- Productivity Commission Steering Committee for the Review of Government Service Provision. (2004). *Report on Government Services 2004*, Canberra: Australian Government. Retrieved from <http://www.pc.gov.au/gsp/reports/rogs/2004/partf.pdf>.
- Productivity Commission Steering Committee for the Review of Government Service Provision. (2005). *Report on Government Services 2005*. Canberra: Australian Government. Retrieved from <http://www.pc.gov.au/gsp/reports/rogs/2005/>.
- Productivity Commission Steering Committee for the Review of Government Service Provision (2006). *Report on Government Services 2006*. Canberra: Australian Government. Retrieved from <http://www.pc.gov.au/gsp/reports/rogs/2005/>.
- Rabin, B., Ure, C., & Smith, G. (1999). *Accelerating literacy progress for new school entrants. The preschool literacy project. Stage 3*. Paper presented at AARE, Melbourne.
- Ramey, S. L., & Ramey, C. T. (1992). *The National Head Start/Public School Early Childhood Transition Study: An Overview*. Washington, D.C: Administration on Children, Youth, and Families.
- Ramey, S. L., Ramey, C. T., & Lanzi, R. G. (2000). The transition to school: Building upon preschool foundations and preparing for lifelong learning. In E. Zigler & S. Styfco (Eds) *The Head Start debates*. Connecticut: Yale University Press.
- Ramsey, G. (2000). *Quality matters. Revitalising teaching. Critical choices. Report of the Review of Teacher Education*. Sydney: NSW Department of Education.
- Rata, E. (2004). Neotribal Capitalism and Public Policy. *Political Science*, 56(1), 55–64.
- Reynolds, A. J., & Robertson, D. L. (2003). School-based early intervention and later child maltreatment in the Chicago Longitudinal Study. *Child Development*, 74, 3–26.
- Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285, 2339–2346.
- Roggman, L.A., Langlois, J. H., Hubbs-Tait, L., & Rieser-Danner, L. A. (1994). Infant day-care, attachment, and the 'file drawer problem'. *Child Development*, 65, 1429–1443.
- Rogoff, B. (1990). *Apprenticeships in thinking: Cognitive development in social context*. NY: Oxford University Press.
- Rowe, K. (2002). The importance of teacher quality. *Issue Analysis*, No. 22, February 2002, Sydney: Centre for Independent Studies. Retrieved from <http://www.cis.org.au>
- Rowe, K. (2004). In good hands? The importance of teacher quality. *Educare News*, 149, 4–14.

- Rowe, K. (2005). *Report of the National Enquiry into the Teaching of Literacy*. Canberra: DEST.
- Rowe, K., & Rowe, K. (2004). *Impact of early childhood on early learning*. Presentation to the Early Childhood Public Forum, Melbourne, 29 February.
- Sammons, P., Sylva, K., Melhuish, E. C., Siraj-Blatchford, I., Taggart, B., & Elliot, K. (2002). *Measuring the impact of pre-school on children's cognitive progress over the preschool period*. Technical Paper 8a, London: Institute of Education, University of London.
- Sammons, P., Sylva, K., Melhuish, E. C., Siraj-Blatchford, I., Taggart, B., & Elliot, K. (2003). *Measuring the impact of pre-school in children's social/behavioural development over the preschool period*. Technical Paper 8b, London: Institute of Education, University of London.
- Sayers, M. (2004). The Australian Early Development Index: Building better communities for children. *Every Child*, 11(4), p. 30.
- Schools Council. (1992). *A snapshot of the early years of schooling*. Canberra: AGPS.
- Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry preschool Study through Age 27*. Ypsilanti, MI: High Scope Press. ED 366 433.
- Sebastian, P. (1981). Day care. Policy proposals for quality and care. *Australian Journal for Early Childhood*, 6(2), 38–44.
- Semann, A. (2004). Child care policies needed now! *Broadside*, July 2004, p. 1.
- Senate Employment, Education and Training Reference Committee. (1996). *Report on the enquiry into early childhood education: Childhood matters*. Canberra: Commonwealth of Australia.
- Shonkoff, J., & Phillips, D. (2000). *From neurons to neighborhoods. The science of early childhood development*. Washington DC: National Academy Press.
- Shore, R. (1997). *Rethinking the brain: New insights into early development*. New York, NY: Families and Work Institute.
- Siraj-Blatchford, I., Sylva, K., Mutton, S., Gilden, R., & Bell, D. (2002). *Researching effective pedagogy in the early years: DfES Research Report 356*. London: DfES, HMSO.
- Siraj-Blatchford, I., Sylva, K., Taggart, B., Sammons, P., Melhuish, E., & Elliot, K. (2003). *Technical Paper 10: The Effective Provision of Pre-School Education (EPPE) Project: Intensive Case Studies of Practice across the Foundation Stage*. London: DfEE / Institute of Education, University of London.
- Social Policy Research Centre. (2004). *Early Childhood Teachers and Qualified Staff*, Report 4/04. Sydney: SPRC University of New South Wales.
- Sparling, J. J., Wasik, B. H., Ramey, C. T., & Bryant, D. M. (1990). A longitudinal study of two early intervention strategies. Project CARE. *Child Development*, 61, 1682–1696.
- Stanley, F. (2003). *State of the Alliance*. Report from the Australian Research Alliance for Children and Youth, December.
- Stanley, F. (2004a). *The Australian*, 13 August 2004, p. 9.
- Stanley, F. (2004b). *Sydney Morning Herald*, 15 March 2004, p. 15.
- Sylva, K., & Wiltsher, J. (1993). The impact of early learning on children's later development. *European Early Childhood Research Journal*, 1(1), 17–40.
- Talay-Ongan, A. (2000). Neuroscience and early childhood: A necessary partnership. *Australian Journal of Early Childhood*, 25(20), 28–33.
- Thomson, S., Rowe, K., Underwood, C., & Peck, R. (2005). *Numeracy in the early years*. Canberra: DEST/ACER.
- Tiffen, R., & Gittins, R. (2004). *How Australia compares*. Cambridge, UK: Cambridge University Press.
- Vaughan, B., Gove, F., & Egeland, B. (1980). The relationship between out of home care and quality of infant–mother attachment in an economically disadvantaged population. *Child Development*, 51, 1203–1214.
- Vygotsky, L. S. (1978). *Mind in society. The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Warrilow, P., Fisher, K., Cummings, K., Sumsion, J., & a'Beckett, C. (2004). *Early childhood teachers and qualified staff*, Social Policy Research Centre. Report 4/04, Sydney: The University of NSW Research Consortium.

- Watson, S., Schafer, P., & Squires, B. (2000). *Think global, document local: Using data and Information Technologies to move the early childhood agenda*. The Finance Project. Retrieved from http://www.financeproject.org/think_global.pdf.
- White, D. (2004). Care workers back industry crisis. *Bayside Bulletin*, 14 September 2004.
- Whitebook, M., Howes, C., & Phillips, D. (1989). *Who cares? Child care teachers and the quality of care in America*. Executive summary of the National Child Care Staffing Study. Oakland, CA: Child Care Employee Project.
- Willer, B. A. (1988). *The growing crisis in child care*. Washington, DC: NAEYC.
- Winter, P. (2003). *Curriculum for babies and toddlers*. PhD Thesis, University of Adelaide.
- Woodhead, M. (1994). When 'effects' become 'causes'. A comment on the 'impact of early learning'. Open Dialogue: Peer Review. *The British Psychological Society, Education Section Review*. 18(20), 61–63.
- Wylie, C. (2004). *Twelve years old and competent. A summary report to the Ministry of Education*. Wellington: NZCER.
- Wylie, C., Thompson, J., & Lythe, C. (2001). *Competent children at 10. Families, early education and schools*. Wellington: NZCER.
- Wylie, C. (with Thompson, J.) (2003). The long-term contribution of early childhood education to children's performance – evidence from New Zealand. *International Journal of Early Years Education*, 11(1), 69–78.
- Zigler, E., & Styfco, S. (Eds), (1993). *The Head Start debates*. Connecticut: Yale University Press.
- Zill, N., Resnick, G., & O'Donnell, K. (2001). *Growth in children's literacy skills in Head Start and early elementary school. Implications for preschool curricula*. Washington, DC: US Department of Health and Human Services.

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Alison Elliott is Director of the Early Childhood Research Program at ACER and Adjunct Professor of Education at University of Canberra. Her expertise is in young children's development, learning and wellbeing, early years' pedagogy and curriculum, and early education policy and strategy. An active contributor to public debate in the field, she is the editor of *Every Child*, and author of numerous academic and professional publications.

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